

MANUFACTURERS' RECORD

A WEEKLY REVIEW OF THE IRON, STEEL, METAL & HARDWARE TRADES.

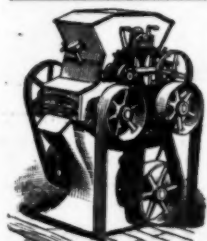
AND A MANUFACTURING AND TEXTILE PAPER, DEVOTED TO THE UPBUILDING OF SOUTHERN MANUFACTURES AND THE DEVELOPMENT OF THE MATERIAL RESOURCES OF THE SOUTH.

VOL. 8. No. 5. {
WEEKLY. }

BALTIMORE, SEPTEMBER 12, 1885.

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Of Every Description. **COTTON and WOOLEN MACHINERY.** Office & Store, 137 Market St., Philadelphia. Of Every Description.



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Flour Mill Machinery.

We make Rolls or Portable Mills for making New Process Corn Meal.
Complete outfits on any system Rolls or Stones for Wheat Grinding.

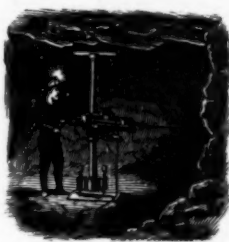
Send for Circular of our \$500 Flour Mill Outfit.



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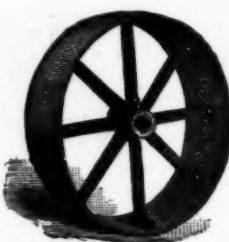
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OUR BELTING is made of Leather, tanned on the surfaces only; the interior (which is the fibre and strength of the hide) is not tanned, but Rawhide fulled and softened by our patent process. Our belting is more pliable, and hugs the pulley better and transmits more power than any other Belt. It does not pull out at the laccholes or rivets. It stretches less than any other Belt. It works equally well for the largest Driving Belts or for the fastest running machinery and smallest pulleys. OUR LACE LEATHER is made of Rawhide, by our patent process, without any tanning and is stronger and will wear better than any other. WE ALSO MAKE THE BEST PICKER LEATHER AND BELT GREASE IN THE COUNTRY. Satisfaction guaranteed.

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Block Safety Hammerless,

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Handsome Hammer Gun made. Hammers completely below line of sight.
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Wiswell Ore Pulverizer and Amalgamator Combined.

The cost of this Mill is much less than any other machine of sufficient capacity to do the same amount of work.

It requires less power to run it, (10-horse being sufficient.)

The wear and tear of the Mill is much less than any other Quartz Mill doing the same amount of work, and the quality of the work done by it is greatly superior to work done in any other Quartz Mill now in use.

It crushes to a uniform fineness and makes no slimes, so that no sizing is required for concentration.

The Mill is equally well adapted to crushing and pulverizing of all classes of ores, either for amalgamation or concentration, and will pulverize and amalgamate from one-half to one ton per hour, according to character of ore and fineness of screens.

With ordinary care there is no loss of mercury by flouing, and consequent loss of gold, as in most other Mills where mercury is used in the Mill.

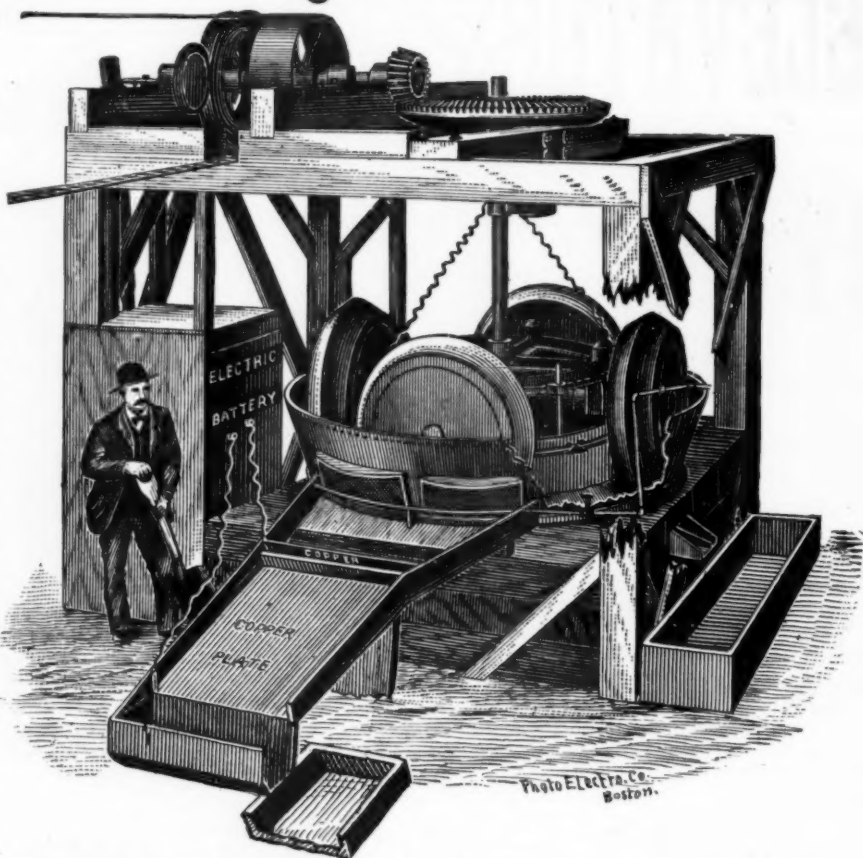
Amalgamation is carried on in the same operation with the crushing. The mercury is placed in the Mill in quantities varying from 10 to 40 pounds.

The application of electricity to the Mill for the purpose of cleaning and keeping the mercury alive has been to a very large extent superseded by the invention and introduction of the Mercury Trap in the Mill for the purpose of drawing off the mercury when charged with gold or on the slightest indication of flouing. By this ingenious device the mercury can be changed as often as desired without loss of time in either crushing or amalgamating. By opening this Trap the amalgam is discharged from the Mill in three minutes, and clean mercury introduced in its place.

To those familiar with running a Gold Mill this latter advantage will be greatly appreciated; in fact, it gives the mill-man full control of his work.

This Mill has been on exhibition at the foundry of Messrs. Bisbee & Endicott, at Chelsea, Mass., for the past 18 months, a good part of the time in active operation, and we have treated the most rebellious ores from many mining districts with most satisfactory results to the parties concerned.

The past year we have sold many Mills, which may be found in Michigan, North Carolina, Dakota, Montana, Idaho, Colorado, California, Mexico, Nova Scotia, etc. All those in operation are giving the most perfect satisfaction, as testimony will prove, and we will take pleasure in referring to any one of these on application.



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Manufacturers of

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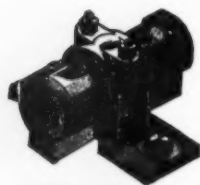
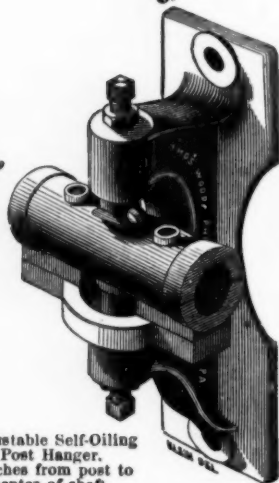
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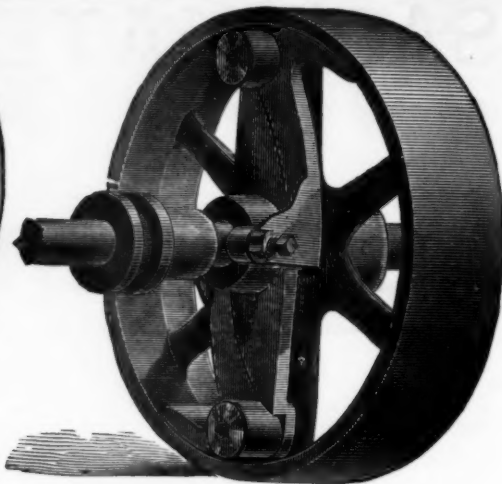
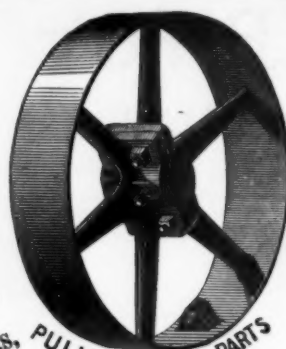
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Ball and Socket
Self-Oiling Pillow Block.DOUBLE-BRACED ADJUSTABLE
SELF OILING HANGER.Adjustable Self-Oiling
Post Hanger.
6 inches from post to
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WITH IMPROVED RECKS.
SHAFTING,
With Patent
ADJUSTABLE SELF-OILING HANGERS, PULLEY IN TWO PARTS.
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Also WALL, POST AND GIRDER HANGERS.
Pulleys from 4 inches to 10 feet in diameter.
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Pulleys in two parts, any size required.
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where possible to transmit power by belts.
PULLEYS from 4 inches to 10 feet in diameter.

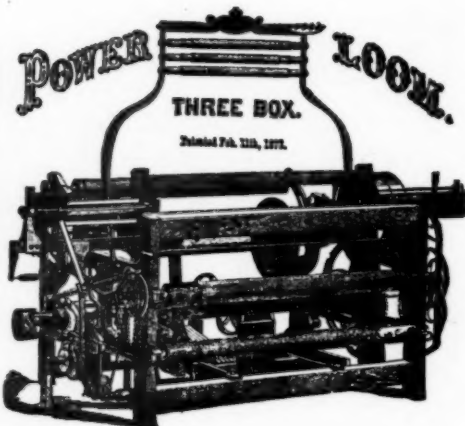
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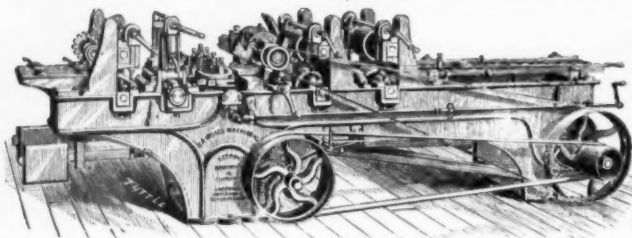
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We received eight First-Class GOLD MEDALS at the World's Exposition, at
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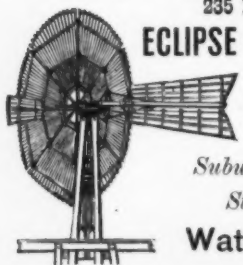
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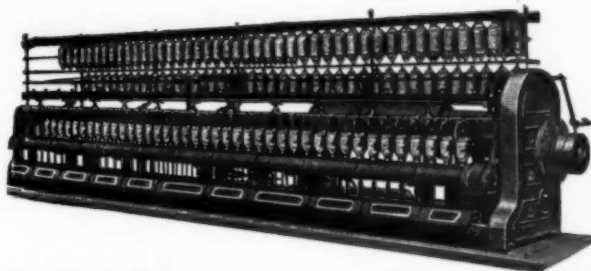
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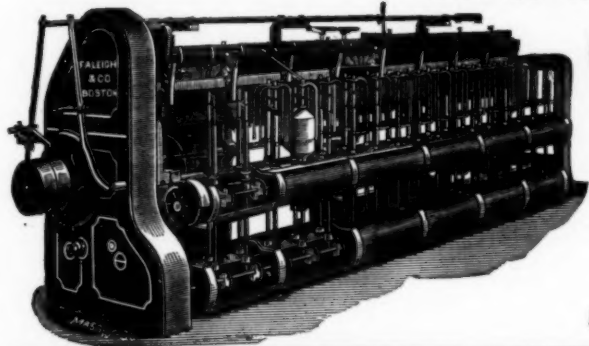
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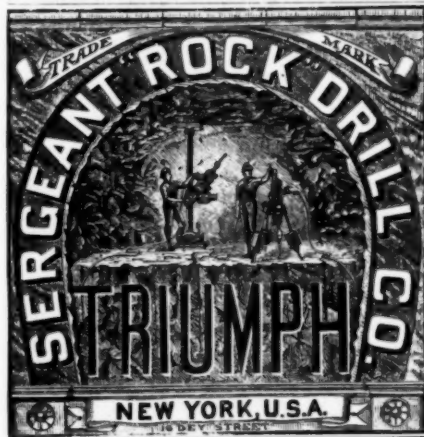
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GOLD MEDAL AWARDED NEW ORLEANS, 1885, FOR BEST RUNNING BELTS.

*Made PERFECTLY Straight and any Length without Joints.**For Main Driving it is the Best. Much Cheaper Than Leather.*

MANUFACTURED BY

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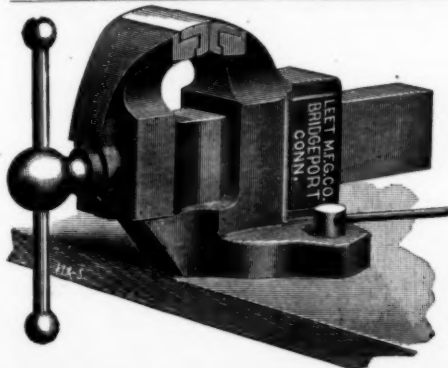
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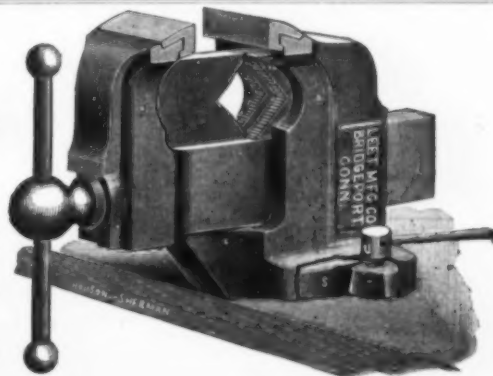
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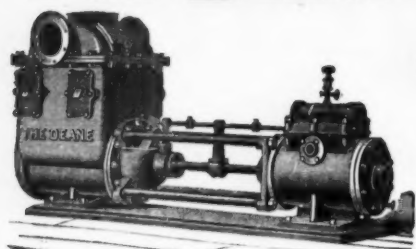
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Patent Sliding Jaw Bench Vises.

WITH SWIVEL BOTTOM.

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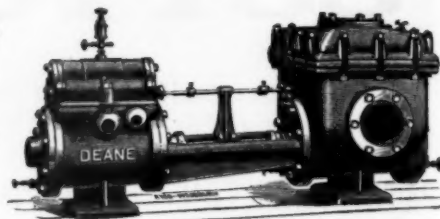
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IRRIGATION PUMPS ARE SPECIALTIES.

Water Works Pumping Engines for Cities and Towns.

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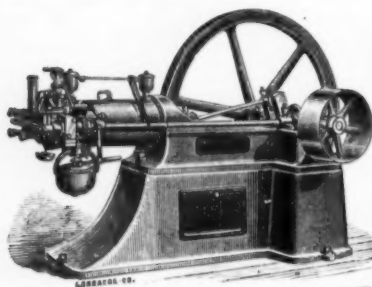
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IT CONTAINS NEITHER GLYCERINE NOR
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It Does Not Freeze. Can be shipped by express, railway or steamship lines. Neither of the two ingredients are explosive until combined, and when combined are safer than Dynamite. This explosive approximates Nitro-Glycerine in strength. Send for circulars to

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20 to 70 per ct. less Gas
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ANY other ENGINE.

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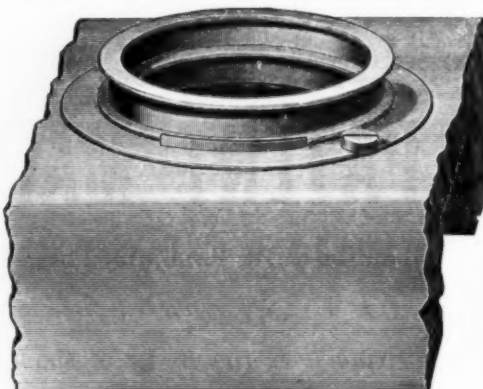
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DOUBLE ADJUSTABLE Spinning Rings.

GEORGE DRAPER & SONS,
HOPEDALE, MASS.

TELEGRAPH ADDRESS AND RAILROAD STATION,
MILFORD, MASS.



Number of Rings sold.	Number of Rings sold for repairs.
1869..... 6,005.....	
1870..... 20,258.....	
1871..... 38,648.....	
1872..... 94,264.....	12
1873..... 117,301.....	
1874..... 168,382.....	500
1875..... 223,924.....	963
1876..... 285,319.....	947
1877..... 270,811.....	946
1878..... 215,214.....	3,309
1879..... 336,918.....	8,007
1880..... 567,860.....	11,264
1881..... 659,730.....	8,974
1882..... 636,715.....	22,515
1883..... 416,500.....	21,689
1884..... 319,869.....	25,105
1885, 5 mos. 112,522.....	12,118
Total number sold in 16 years.. 4,390,260	116,349
Total number in use 4,373,911.	

The great durability of our Rings is shown by the fact that we have more rings in use over twelve years old than all we have sold for repairs.

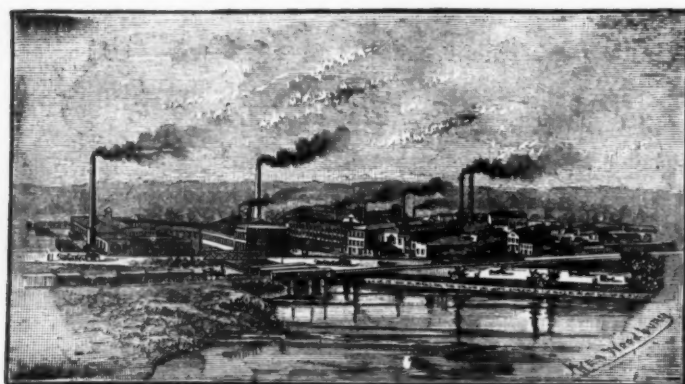
This statement shows unmistakably that a mill once supplied with our rings need think but little of the cost of repairs. As the number sold for repairs is an average of about twenty per cent. of the number sold the tenth year before, the average life of our rings will be at least twelve years.

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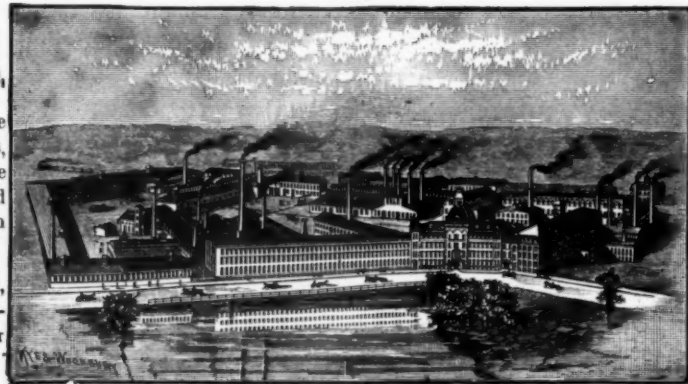
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BALTIMORE, SEPTEMBER 12, 1885.

CORRESPONDENCE relating to the manufacturing, mining, lumbering and all other material interests of the Southern States is solicited. Reaching so many capitalists in all parts of the United States seeking profitable investment in the South, the MANUFACTURERS' RECORD offers an excellent chance for the people in that section to place the advantages of each locality before those likely to be interested. We will take great pleasure at all times in telling what has already been accomplished in the South, and showing up the opportunities of doing still more.

AN International Exhibition of Navigation, Traveling, Commerce and Manufactures, will be held in Liverpool in 1886, with the Prince of Wales as president. It will be devoted to exhibits of everything that pertains to these subjects; included under manufactures being minerals of all kinds and their uses; cutlery, tools, general hardware, textile goods, manufactures of wood, etc. A very handsome 16-page circular, giving some of the preliminary arrangements, has just been issued. It can be obtained from Mr. Dennis Donohoe, British Consul at Baltimore.

THE cost of making iron in Alabama is now settled. There is no use figuring on the matter any longer. An Indianapolis editor has tackled the subject, and he presents his figures to show that iron can be made in Alabama at \$6.70 a ton, to which, he generously admits, "should be added the salaries of officers and interest on investment." Next!

If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year, or six months for \$1.50.

The Growth of Cotton Manufacturing in the South.

That the South is destined to be the center of the cotton manufacturing interests of this country admits of no questioning. Its natural advantages for this business are far superior to those to be found in any other section. The temporary depression in this industry is sure to pass away with the return of prosperity to the country, and this good time seems to be rapidly approaching. During the great activity that preceded the depression that is now passing away, many cotton mills were erected in the South, some of them costing entirely too much in proportion to the number of their spindles, and some without sufficient commercial capital to have carried them through successfully even if business had continued prosperous. It was only natural that such mills should be seriously affected by the decline in values and the stagnation in trade that commenced just as they were about ready to begin operations. Taken as a whole, however, and considering the disadvantages of many mills, owing to the high cost of building, lack of sufficient capital and inexperienced management, the cotton manufacturing interests of the South have stood the strain of the long depression remarkably well. They have, in fact, really emphasized the South's advantages for this industry.

Mr. Edward Atkinson, of Boston, in his report for the census upon the cotton manufacturing interests of the country, after showing the much greater advantages that New England possessed for this industry as compared with the most favored districts of England, wrote:

"It may be said that this proves too much, and that the cotton spinners of the Southern States will have the same relative advantage over New England. Let this be freely admitted. We are treating the question of the future supremacy of the United States in the manufacture as well as the growth of cotton, and if the future changes in population, wealth and condition of the different sections of this country shall cause the increase of spindles, especially in the coarse fabrics, to be planted in the healthy hill country of Northern Georgia, Eastern Tennessee and the Carolinas, it will simply be the greater evidence that natural laws are paramount. If Georgia has twice the advantages over Lancashire that New England now possesses, it will only be the fault of the people of Georgia if they do not reap the benefit of it."

The force of Mr. Atkinson's logic will assuredly be seen in the not very distant future. Not Georgia, the Carolinas and Tennessee only will be the seat of important cotton manufactures; the other Southern States will also share in this growth. As yet Texas has done almost nothing in this direction; but what a magnificent field for cotton manufacturing! Pro-

ducing about 1,500,000 bales of cotton, and already having within her own borders 2,500,000 people, she exports her raw cotton and imports her dry goods. Besides supplying her own population that is so rapidly being added to, there is an immense field in the countries south of her for which she ought to manufacture large quantities of cotton goods. Too much, however, must not be expected immediately of the South in manufactures. Comparatively speaking, they are new, and it takes time to build up great industries with wide ramifications.

To show what has been done in the development of the cotton manufacturing interests of the South, we present the following comparisons, showing the number of mills, spindles and looms when the census was taken in 1880, and the number at the present time:

NUMBER OF COTTON MILLS IN THE SOUTH.			
States.	1885.	1880.	Increase.
Alabama.....	31	16	15
Arkansas.....	3	2	1
Florida.....	2	1	1
Georgia.....	66	40	26
Kentucky.....	9	3	6
Louisiana.....	9	2	7
Maryland.....	26	19	7
Mississippi.....	14	8	6
North Carolina.....	97	49	48
South Carolina.....	34	14	20
Tennessee.....	43	16	27
Texas.....	5	2	3
Virginia.....	14	8	6
Total.....	353	180	173

In the number of mills there has been an increase of nearly 100 per cent. The largest total increase, though not the largest percentage of increase, was in North Carolina. In that State the general disposition has been to build small mills and many of them, while in South Carolina and Georgia popular favor has been for large mills.

NUMBER OF SPINDLES AND LOOMS.			
	1885.	1880.	
	No. of Spindles.	No. of Looms.	No. of Spindles.
Alabama.....	102,866	1,670	55,072
Arkansas.....	3,900	30	2,015
Florida.....	1,988	816
Georgia.....	385,613	8,648	200,974
Kentucky.....	99,704	671	9,022
Louisiana.....	45,644	936	6,697
Maryland.....	169,950	3,082	125,014
Mississippi.....	40,728	828	26,172
N. Carolina.....	257,576	3,118	102,767
S. Carolina.....	224,732	4,579	92,788
Tennessee.....	117,444	1,526	46,268
Texas.....	7,968	152	2,648
Virginia.....	72,624	1,762	44,336
Total.....	1,460,697	27,004	713,989

These figures show an increase of over 100 per cent. in the number of spindles, and an increase but slightly less in the number of looms. The States that show up most prominently in this increase are Alabama, Georgia, Kentucky, Louisiana, Maryland, North Carolina, South Carolina, Tennessee and Virginia. The increase in each State has been as follows:

	Spindles.	Looms.
Alabama.....	47,794	610
Arkansas.....	1,885
Florida.....	1,112
Georgia.....	184,639	3,935
Kentucky.....	20,682	598
Louisiana.....	39,547	816
Maryland.....	44,936	757
Mississippi.....	14,536	124
North Carolina.....	154,809	1,158
South Carolina.....	131,944	2,803
Tennessee.....	71,176	460
Texas.....	5,340	81
Virginia.....	28,288	438
Total.....	716,708	11,782

In the number of spindles and looms, Georgia has made the largest increase—184,639 of the former and 3,935 of the latter—while North Carolina is second in the increase of spindles, but is exceeded in the number of looms by South Carolina. These

three States taken together show a very large gain:

	Spindles.	Looms.
Georgia.....	184,639	3,935
North Carolina.....	154,809	1,158
South Carolina.....	131,944	2,803
Total gain in three States.....	471,392	7,896

It may very truthfully be said that notwithstanding the increase in cotton mills in the South, that section has but a small percentage of the total number of spindles in the country. While this is true, yet everything must have a beginning. It is not so much to the aggregate number of spindles as to the percentage of increase in the different sections that we must look to rightly appreciate the position of this industry. In 1880 there were 10,653,435 spindles in the United States, of which the South had only 713,989, or 6.7 per cent.; while there are now 13,536,745 spindles, of which the South has 1,460,697, or 10.7 per cent. From 1880 to 1885 the increase in the number of spindles in the South was 104.5 per cent., while the increase in the balance of the country was only 21.3 per cent. It is this difference in the rate of increase more than the aggregate gain in the number of spindles that shows the progress of the South.

Value of Southern Property.

The growth of the South is probably shown in no way better than in the increase in the assessed value of property since the census year 1879-80. The remarkable gain made in this direction has been repeatedly set forth in the MANUFACTURERS' RECORD; and now the New Orleans Times-Democrat, in its special trade issue, sums up the matter by presenting the following figures, showing the assessed value of property in twelve of the Southern States in the census year June 1, 1879, to May 31, 1880, and in 1885:

States.	1885.	1879-80.
Alabama.....	\$185,400,000	\$117,486,181
Arkansas.....	158,350,000	86,892,441
Florida.....	60,042,555	29,471,618
Georgia.....	325,650,000	235,650,530
Kentucky.....	390,827,913	318,037,875
Louisiana.....	220,000,000	158,587,495
Mississippi.....	146,800,000	106,594,708
North Carolina.....	222,300,000	156,268,241
South Carolina.....	158,703,000	122,237,986
Tennessee.....	245,380,000	223,211,345
Texas.....	603,060,917	304,193,163
Virginia.....	360,000,000	314,576,822
Total.....	\$3,076,514,435	\$2,184,208,505

The increase in five years, as shown by these figures, has been \$892,305,930, despite the lower range of values of all kinds in 1885 as compared with 1879-80. The real increase has been much larger than these figures indicate; but take it as it is, what a grand record of progress it shows in five years—nearly \$900,000,000 added to the value of the South's property. It tells in a way that cannot be questioned of the South's wonderful growth.

REPORTS from the South show quite serious injury to the cotton crop, with prospects favoring a considerably smaller yield than was looked for a few weeks ago. It is quite possible that the natural disposition to exaggerate damage to crops has had some effect in this case, and that the yield will be rather better than these reports would indicate.

Prosperity of Southern Cities— The Record of the Year's Business.

It is customary with the leading daily papers in the South to publish on September 1st of each year a review of the trade of their respective cities for the commercial year ending August 31. In view of the short cotton crop of last year following a small crop in 1883, and of the general depression in all branches of trade, it was hardly to be expected that the summary of the year's trade would compare very favorably with preceding years, and yet these reviews show that the cities of the South made good progress in 1884-85, despite dull times, and that their trade in many cases was largely in excess of the preceding year.

CHARLESTON.

The News and Courier, of Charleston, with its usual enterprise, presented a very full statistical review of the trade of that city, from which we gather the following facts: The aggregate money value of Charleston's trade during the past year was \$67,650,058, against \$64,512,190 for the preceding year—an increase of over \$3,000,000, which really represents a larger increase than these figures at first sight indicate, as the values of all merchandise were lower last year than for many years. The foreign trade of the port was \$18,783,047 of exports and \$404,690 of imports, compared with \$16,115,630 exports and \$432,937 imports for the preceding year, showing that in this line of trade there was also an increase over the year before.

It is interesting and instructive to compare the statistics of manufacturing in 1880, according to the census reports, with the statistics of the past year. By doing this we gain some idea of what progress has been made in manufactures by a city that has not been usually looked upon as much of a manufacturing center. The statistics for the two years compare as follows:

	1879-80.	1884-85.
No. of factories.....	194	367
No. of hands employed....	2,146	6,861
Capital.....	\$1,718,300	\$6,283,500
Value of products.....	\$2,732,590	\$9,380,400

These figures are remarkably instructive. They show a growth in the number of manufacturing establishments from 194 to 367, or nearly double; in the number of hands employed an increase from 2,146 to 6,861; in capital invested an increase from \$1,718,300 to \$6,283,500, and in the value of products from \$2,732,590 to \$9,380,400. As will be seen from an examination of these figures, this increase in capital, in value of products and in the number of hands employed is largely due to the increase in the number of establishments, some of which are very extensive in their operations—one of them being a \$500,000 cotton mill. Charleston is certainly to be congratulated upon such a splendid showing. Her business men may well take courage and press forward more vigorously than ever.

MEMPHIS.

The Memphis Avalanche devotes 16 pages to the telling of what Memphis is and what it has done during the year. The remarkable growth of this city during the last year or two is very gratifying. Weighted with a heavy debt and afflicted with a terrible yellow fever scourge, Memphis only a few years ago gave but little promise of her present great prosperity. She has now arranged her debt, vastly improved her sanitary condition, and is rapidly building up in manufactures and trade.

There is no surer indication of the business of a city than its bank clearings, and in them can be read the pulsations of trade from week to week and year to year. During the last twelve months the weekly reports of the bank clearings were closely watched by business men, hoping to see some signs of improvement. Among the few cities that during nearly the whole of the year showed an increase week after week, as compared

with the corresponding weeks of the preceding year, Memphis stood out very prominently. The bank clearings in Memphis for the last six years show the steady growth of that city's business. They were as follows:

Years.	Bank Clearings.
1884-85.....	\$65,638,305
1883-84.....	59,287,039
1882-83.....	53,463,929
1881-82.....	44,807,787
1880-81.....	44,603,210
1879-80.....	41,874,363

Comment upon these figures is hardly necessary.

The outlook of Memphis now could scarcely be more encouraging. Transportation facilities are increasing, business improving, and everybody cheerful and expecting a big trade.

MONTGOMERY.

Some months ago a banker in Montgomery wrote to the MANUFACTURERS' RECORD that "everything in Montgomery is on a boom," and it seems that he was about right. Montgomery has, indeed, been showing remarkable activity, especially in new enterprises, for many months. The Advertiser, in summing up the year's trade, presents some interesting facts regarding the growth of Montgomery. The assessed value of property in that city and the county shows an increase of \$1,500,000 over the preceding year, while \$700,000 was invested in new buildings and street improvements. The receipts of cotton were 143,000 bales, or more than ever before received in one year, even during big crop years.

The 16 wholesale and 60 odd retail grocery houses did a business of about \$10,000,000, \$8,000,000 of which was wholesale trade and the remainder retail. The value of the grain, hay and feed was \$3,000,000; meats and lard, \$1,800,000; flour, including 80,000 barrels manufactured there, \$1,000,000; sugar and molasses, \$600,000; tobacco and cigars, \$250,000; wines and liquors, \$250,000; lime and cement, \$200,000; bagging and ties, \$300,000; soap, \$275,000, and grocery sundries, \$1,250,000. The value of the corn meal ground there and sold was about \$300,000. Coal sold there during the year reached something over \$100,000.

The dry goods business of the year was \$4,200,000, of which jobbers sold \$3,000,000 and retail dealers \$1,200,000.

The clothing business, including clothing manufactured there, amounted to \$450,000; the boots and shoes to \$925,000; hats and caps, \$150,000; furniture, \$275,000; books and stationery, \$150,000; jewelry, \$150,000; drugs, \$200,000. Premiums collected on insurance policies amounted to \$125,000.

The hardware business aggregated \$1,500,000; carriages, buggies, wagons and harness, \$250,000; crockery and glassware, \$130,000. 17,000,000 brick were manufactured, which, at \$6 a thousand, aggregated \$102,000; other building material may be set down at \$225,000.

The ice manufactured in Montgomery was valued at \$31,000; fertilizers manufactured there, \$350,000; fertilizers carried there and sold, \$350,000; oils manufactured and refined, \$300,000.

The manufactures of Montgomery, big and little, and including all establishments that employ productive labor, give employment to 1,500 people.

SAVANNAH.

The News, of Savannah, in its annual report shows that "dull times have failed to stem the tide of prosperity" of that city. Business generally has been good, and the volume of trade is believed to have been fully \$100,000,000. A conservative estimate of the amount of business done in the different branches of trade in Savannah for the year ended September 1, 1885, is as follows:

Cotton.....	\$37,500,000
Groceries.....	13,500,000
Liquors, tobacco and cigars.....	3,500,000
Provisions.....	4,000,000
Dry goods.....	3,500,000
Boots, shoes and hats.....	1,500,000
Naval stores.....	3,000,000
Lumber.....	2,500,000
Fertilizers.....	3,000,000
Hides, wool, etc.....	750,000
Hardware.....	750,000
Furniture.....	500,000
Jewelry.....	1,250,000
Retail.....	18,000,000
Miscellaneous.....	1,750,000

Total.....\$95,000,000

The Model City of the South. Anniston and its Advantages.

[Editorial Correspondence Montgomery, Ala., Advertiser.]

ANNISTON, August 29, 1885.

A few years ago travelers on the old Selma, Rome & Dalton railroad could see against the side of a bleak looking hill a few miles beyond Oxford, the remains of what had once been an iron furnace. The ore bank was there, and part of the foundation of a furnace. Every thing else was desolation. Now the same travelers would never realize the spot. Instead of the solitude and dreariness that then was painful, is life, hope and progress. A few men realized what could be accomplished at a spot so favorably located, and with a faith that knew no such word as fail, invested their means and began to build up. They have created a beautiful town which has more the ways of a city than hundreds that are far more pretentious. The streets are graded and macadamized, the side-walks are paved, there is a perfect system of protection against fire, water-works ample for fifty thousand people (and the purest and clearest of water), electric lights for streets and houses, and a thorough and rigid sanitary system. Cool heads and brains laid the foundations of this town, and generations to come will bless the men who provided at the start against evils which other towns have had to overcome at the expense of life and money. Comfort and health were the main things governing in the original plans of Anniston, and both have been amply secured. The lofty hills will some day be the abode of thousands of citizens, who can look down upon the lovely town in the valley, but the dwellers in the latter will be as free from malaria and as healthy as those who seek the loftier spots. Anniston has been so often described in the columns of the Advertiser that it is unnecessary to dwell upon the loveliness of its location and the picturesqueness of its surroundings. Certain it is that the lovers of the beautiful can here rest their eyes upon hills and vales that rival those in any other portion of our favored land. In any direction the views are superb. As a place for homes and comforts, it would be difficult to find one answering all demands more completely than this.

Our former citizen, Gen. Daniel Tyler, and his son, Mr. Alfred L. Tyler, and Mr. Sam Noble and several of his brothers were the pioneers who forecasted the possibilities of Anniston, and exemplified their faith by their works. What has been the outcome? Let the following statement tell:

THE IRON FURNACES.

The Woodstock Iron Company own two blast furnaces, whose exclusive product is car wheel iron; capacity sixty tons per day; employees, including labor at furnace, ore diggers, charcoal makers, limestone quarrymen, repair shops, etc., with their families, foot up about 2,500 persons. The only interest owned in the town by the Woodstock Iron Company is the iron furnaces. The material used in this business is all obtained within the town limits, or in a short distance from the town. The ore used is commonly known as brown hematite. It is technically a limonite, so called because of the moisture hygroscopically held by it. This ore is very low in phosphorous and silicon, the comparative absence of silicon making the ore more easily smelted than the other kinds of ore found in Alabama, and they require much less fluxing in the furnace. * * * The iron made at Anniston is exclusively for use in manufacturing railroad car wheels. There are in the State of Alabama eight companies making charcoal iron from the brown hematite ores. These furnaces are all, with two exceptions, on the line of the E. T., Va. & Ga. Railroad.

The iron made at Birmingham is from the red hematite or fossiliferous ores, and is

used for rolling mill, foundry and machinery purposes. The Birmingham iron does not come in competition with the Anniston iron, as the two are now used for entirely different purposes.

Down the narrow guage road, the Anniston & Atlantic, a few miles distant, is located the thriving town of Ironaton, which may properly be called; an adjunct of this town, the furnace being owned largely by the same parties as the ones here. This furnace is similar to the Anniston works, uses charcoal, and is regarded as about the best charcoal furnace in the United States. Its capacity is sixty tons a day and the ore is of the finest quality, easy accessible and inexhaustible.

The Anniston Manufacturing Company own a cotton factory of 11,500 spindles, employs 350 operatives; about 1,000 persons are sustained by this work. It makes a superior quality of brown goods, and consumes about 4,500 bales of cotton per annum. For some time it has not been running, but all arrangements are complete to commence with full force by the 1st of October.

The Anniston Land and Improvement Company owns a large part of the land within the corporate limits of the town. This company also owns and operates a steam flour and grist mill, water-works with five miles of street mains, and they also have about two hundred dwellings, ranging from the comfortable six thousand dollar cottage to the more humble three room home for the poorer laborers. This company also owns and operates for the town the electric lights by which the streets are illuminated at night.

THE INN.

The same company also owns this delightful resort for the tired traveler and the pleasure-seeker. More than anything else it shows how strong was their belief in the future of the town. It is the most delightful hotel building in the South, and it is a question whether it is surpassed in the United States. Its location is very attractive, and seated on its broad verandahs a wide sweep of country is spread out. A commanding view of hill and dale, mountain and vale is obtained, and the picture is so beautiful that one is loth to cease looking upon it. The building is of brick and stone, and four stories high, besides the basement, which is entirely above ground. The approaches are all macadamized walks and drives, and the park in front, consisting of sixteen acres, is handsomely laid out, and when the trees and shrubbery grow out will be an additional attraction to what appears to be already perfect. Its front is 280 feet, and the verandahs extend the entire length and at each end. At least two hundred guests can be accommodated in rooms, which are supplied with furniture of the most superior kind. Additional rooms could be easily arranged for a still larger number. The bedding is new, fresh and sweet. The halls are all wide and made comfortable by seats, lounges and cosy nooks, here and there. The ladies' parlor is very handsome, with piano and furniture of exquisite pattern. The dining room is not surpassed by any in New York. The walls, side and overhead, are of polished woods, not a particle of plaster or paint being used. The tables and chairs bespeak comfort and elegance. No money has been spared in glass and crockery ware and table linens. The service is delightful and no one hurries through a meal. Everything is so well cooked and served, and the food too of such fine quality, that it is a pleasure to linger around the board. * * *

WATER SUPPLY.

The artesian well was sunk for the purpose of securing a surplus of water for the water works. The well, an eight inch opening, has been sunk 300 feet, and now forces water nearly to the surface in such quantities that the water works' steam pump, throwing 1,124,400 gallons in twenty-four hours, does not lower the level of the water in the well. The success of this well gives the town an assured supply of water for three or four

times the population now here. The intention had been to drive this well much deeper, but the vast quantity of water now obtained made a further prosecution of the boring useless. The pressure is sufficient to enable the hose company to easily throw water, without an engine, over the five-story inn and the tall chimneys of the cotton factory.

CAR WHEELS.

Noble Bros. & Co. have in operation the largest car wheel works in the South. The capacity is 200 wheels per day. They employ mostly skilled labor. They also have just completed a steam forge with two trains of rolls for making the axles on which these car wheels are fastened. The capacity of this forge is sixty tons of car axles per day, and as they will make their axles of the very best of all material, the mill will be run to its fullest capacity to supply the demand. Five hundred persons are sustained by Noble's Car Wheel Works. Mr. John Noble is the presiding genius of this large industry.

Yonkers Manufacturing Company, of 16 Dey Street, New York City. While the principles involved in the operation of this engine are substantially the same as in other gas engines, it possesses several novel features of construction, some of which will be understood from the engraving and description.

The explosive mixture is gas and air, but the gas may be of any kind, as coal, water or oil-gas, and not necessarily the regular fixed-gas. Both the gas and the air are admitted through poppet valves, which possess the merit of requiring little power to operate, and the further advantage of growing tight by use. These valves are driven by cams on a horizontal shaft, which makes one-half as many revolutions as the crank shaft; if required to maintain speed under the imposed load, a charge is admitted and exploded at each second revolution of the engine. When this is not required—as it is not, under ordinary circumstances—the small fly-ball governor shown operates to prevent the opening of the valves for admitting the gas until such

Instead of using the usual gas jet to explode the charges, electricity is employed. For this purpose a miniature dynamo, shown below the cylinder, is employed. This dynamo is driven from a pulley ring on the crank shaft, and the current generated is conducted into the explosion chamber, where, by simple mechanism, it is broken at the proper time, producing an intense spark about the size of a head of a pin in the center of the charge, making ignition positive. With this, no matches are required to be used in starting, nor smoke or smell occurs. This is considered by the manufacturer as a very important feature, as reducing the liability of fire from escaping gas, etc.

In starting, it is only necessary to give the fly-wheel a turn or two, which produces sufficient current to start the engine, when it will continue to run until the gas is turned off.

The cup shown at the top of cylinder is for oiling the piston. The belt shown drives a small shaft carrying a wheel, to which

It will be a source of gratification to thousands to know that Dio Lewis has resumed the publication of his magazine. It appears now under the name of "Dio Lewis's Nuggets," and is crammed full of nuggets of sound sense on health topics. It is a publication that should be read in every family in the land. A more general observance of its teachings would ensure better health and happier lives than the American people now enjoy.

It is published by the Dio Lewis Publishing Company, 69-71 Bible House, New York. The price is \$1.00 per year.

Sheffield's Progress.

SHEFFIELD, ALA., Sept. 4, 1885.

Editor *Manufacturers' Record*:

The Sheffield Contracting Co. have resumed the manufacture of brick at their steam works, being encouraged by the large demand for brick for improvements here. The Iron City Brick Co. commence the manufacture of brick by steam to-day. They have put in a new Frick Engine and Boiler and Sword Brick Machine of large capacity. The Eureka Dry Press Brick Machine of Messrs. Humphries, Rolls & Co. is in successful operation, turning out the smoothest and shapeliest brick I ever saw. The clay used by them seems to be peculiarly adapted for dry press brick, and the machine used is of such powerful construction that I have no doubt the brick will stand every test and remove the prejudices of many persons, resulting from numerous efforts to make at other places dry press brick by light machinery and of clay not adapted to the machine. The other machines in operation here make splendid stiff mud brick, so that Sheffield people can "pay their money and take their choice." The Sheffield Iron Works will be the most extensive in North Alabama. Plans are now being prepared for the machinery, &c.

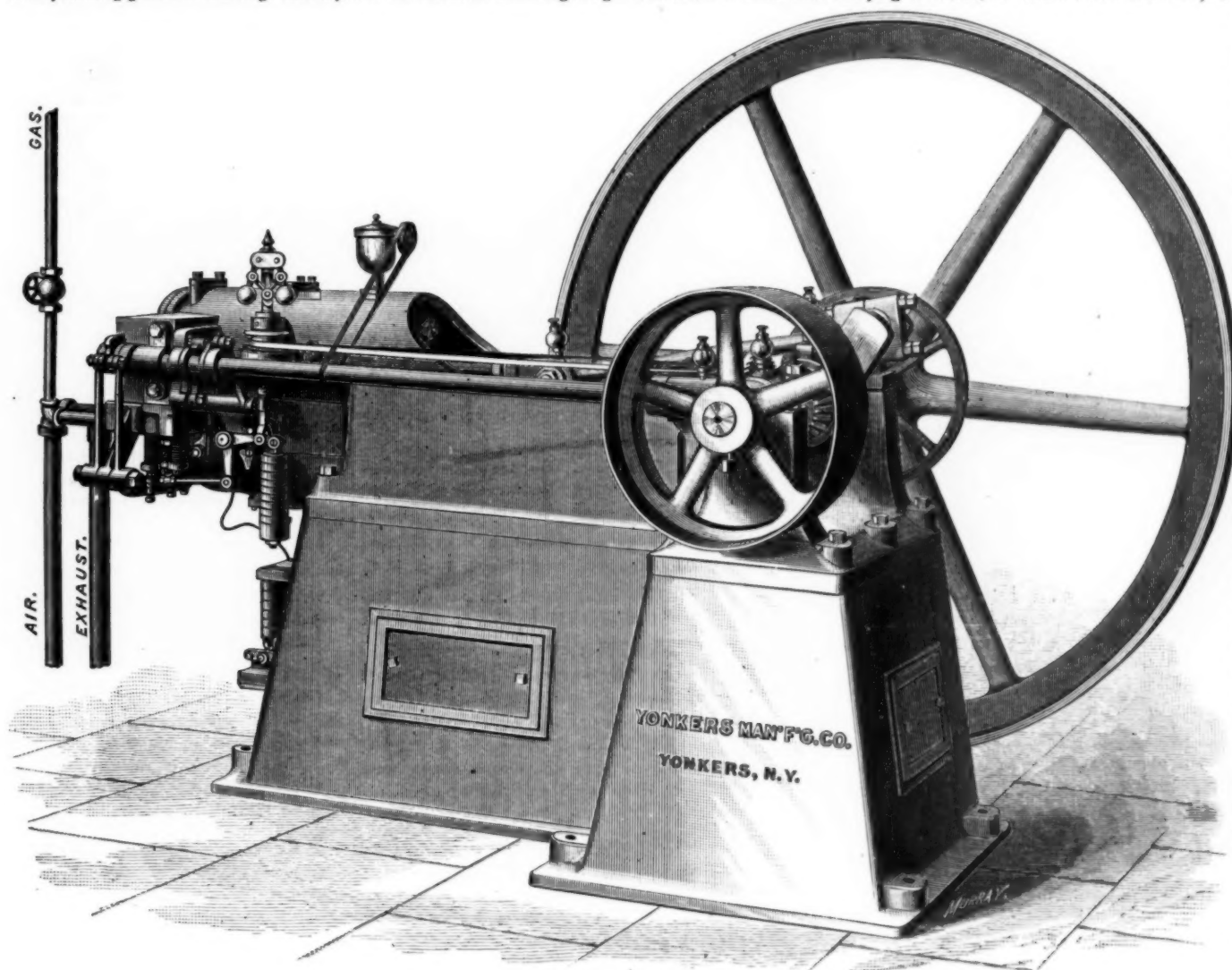
Mr. W. S. Hull, a first-class architect from Jackson, Miss., has decided to locate here for the practice of his profession, and will have his hands full.

Mr. R. G. Hervey, who contracted to build the S. & B. R. R., started down the line yesterday with his chief engineer, Mr. Mitchell, who will immediately proceed to put the portion already constructed in good running order, and to extend the line to the Georgia Pacific or to Birmingham.

Visitors express surprise that Sheffield should have such a fine and well kept hotel as the Cleveland House.

Work on the Sheffield Academy is progressing rapidly. A.

W. B. BELKNAP & CO., of Louisville, Ky., have issued a circular letter, in which they say: "The fall trade opens in such large volume and with such fair prospects that we deem it advisable to remind our friends of the variety embraced by our stock of new and first-class goods." Attention is called in the circular to the various lines of hardware, bar iron, steel, etc., in which this firm are large dealers.



THE PARKER GAS ENGINE.

GENERAL BUSINESS.

The business of Anniston is extending, and every indication of a large and growing trade. Mr. Sid Trapp, late of Montgomery, and Mr. B. B. Comer, are rapidly completing an immense cotton warehouse, and expect at no distant day to add to it a cotton compress. Their well established reputation for business sagacity will give a clear idea of what is believed to be in store for Anniston. There is a First National Bank in successful operation, and Messrs. Riddle & Co. also do a banking and collection business. Groceries, dry goods and all branches of trade are well represented by thorough and reliable merchants.

The Parker Gas Engine.

[American Machinist.]

The engraving on this page represents this engine, which has been the subject of various improvements during the past two years, and which, in its completed form, is now being put upon the market by the Yon-

time as required for the speed and load.

The explosion is not brought about in the cylinder proper, but in an extension at the side and end of it. The force of the explosion operates directly upon the piston, but a large portion of the resulting heat is absorbed and retained by the walls of the explosion chamber. This construction serves the double purpose of requiring less water to be circulated in the water jacket of the cylinder, and of keeping the explosion chamber hot, which prevents waste of heat. Below, but in one casting with the main cylinder, is an air pump, which operates to expel the products of combustion from the explosion chamber, so as to permit the next charge admitted to be free from impurities. This avoids clogging in the cylinder and the necessity of cleaning, and permits the use of any quality of gas, as previously referred to. The vacuum created by the air pump is effective in imparting power to the main piston when it is compressing the charge; this tends to an equalization of effect, and to more regular speed.

three or less loose arms are pivoted. These arms dip in the oil when at the bottom, and when at the top pass over a small funnel-shaped pipe into which the oil is stripped, and passes to the piston.

These engines appear to be thoroughly well constructed of the best materials, and with a design to secure durability and simplicity with little liability to derangement. They are manufactured for the company at the well known works of S. S. Hepworth & Co., Glenwood Station, Yonkers, N. Y., who, we are informed, will, if necessary to supply the demand, employ their extensive works to their full capacity upon them. Regular sizes are from two to ten horse power, inclusive, but larger sizes will be made on special orders.

THE American House, Boston, is adding every day to its fame and popularity as one of the best hotels in the East. There is no pretentious display, but everything is of the very best, and a desire to please is apparent in every department.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

An effort is being made in Anniston, Ala., to organize a stove manufacturing company. E. H. Barron can give particulars.

Willard Warner, President of the Tecumseh Iron Co., Tecumseh, Ala., writes us in regard to the report that he would build a blast furnace in Sheffield, Ala. "All I can say is that we have had some talk about it but no conclusions have been reached as yet."

Connor & Co., 11 N. Grier St., Williamsport, Pa., will erect a saw mill at Calera, Ala., this fall.

Oliver Weiser, York, Pa., contemplates establishing a chain factory in Birmingham or Chattanooga.

William Elliott, Superintendent of the Coosa Furnace, Gadsden, Ala., reports that a rolling mill and foundry will probably be erected in that town.

The Alabama Ochre Co., of Montgomery, Ala., contemplate enlarging their capacity and erecting paint works. Will need grinding machinery, etc.

Minhinett & Withers, Tuscaloosa, Ala., have their new foundry partly in operation.

Work has been commenced on the \$10,000 Methodist Church in Birmingham, Ala. T. W. Coffee can give particulars.

Madison county, Ala., will decide by vote in November, whether or not to spend \$200,000 to build 125 miles of Macadamized roads.

The grist and rice mill of S. A. Mountain & Son, Mobile, Ala., recently damaged by boiler explosion, has been repaired and is now in operation.

J. K. Elliott will establish a ginnery at Talladega, Ala. Machinery has been purchased.

Messrs. Berney, Sloss and Gregory have been appointed a committee by the city council, Birmingham, Ala., to secure electric lights for that city.

J. N. Wade is erecting a ginnery at Trinity, Ala.

A wood-working factory will be erected at Vesuvius, a suburb of Montgomery, Ala. W. C. Bibb Jr., Montgomery, can give particulars.

FLORIDA.

It is stated that the sash and door factory previously reported as to be built at Lake de Funiak, Fla., will be put up by C. H. Dixon, of Pensacola, Fla.

J. D. Gray, Lake de Funiak, Fla., is erecting a saw mill.

Leesburg, Fla., is discussing water-works.

J. A. Chaffin & Co., are preparing to erect a large saw mill at Milton, Fla.

There are rumors of starting a paper mill at Eustis, Fla.

GEORGIA.

Clark & Adams, Elberton, Ga., will add carriage and buggy factory to their machine shops.

Geo. F. Montgomery has ordered machinery for a large planing mill to be erected at Albany, Ga.

The Coweta Fertilizer Co., of Newnan, Ga., previously reported, have purchased a site and will shortly erect their fertilizer factory. H. C. Arnall is president.

There is talk of a company being organized in Atlanta, Ga., to manufacture cotton plaids.

James M. Smith, of Lexington, Ga., has purchased a 100 horse power engine for mill and gin, and for an oil mill which he will establish.

A large planing mill is being erected in Poulan, Ga., by an Indiana company.

Gainesville, Ga., people are discussing the building of a cotton mill.

The Vale Royal Manufacturing Company, Savannah, Ga., will put in new working machinery.

B. H. Bigham, R. S. McFarlin and others, of La Grange, Ga., have secured the right of way for a narrow gauge railroad.

The Atlanta Bridge Works have been reorganized, and a new company will take possession and start these works up again.

D. C. Hadaway will establish a steam laundry in Savannah, Ga.

The Franklin & McDonald Gold Mining Co., Ophir, Ga., are putting in new machinery.

The contract for building the new college at Cochran, Ga., has been awarded to Mike O'Brien, of Hawkinsville, Ga., at \$9,000.

Additions are being made to the mill of the La Grange Oil & Manufacturing Co., La Grange, Ga.

A stock company is being formed in Columbus, Ga., to erect a barrel factory. E. H. Jenkins can give particulars.

Stephen Tate has leased the White Path gold mine in Georgia, and will develop it.

It is reported that water works are to be established at Fort Gaines, Ga.

KENTUCKY.

The Golden King Mining Co., Louisville, Ky., the organization of which was lately reported, will purchase mining machinery.

Eisenman Bros. & Co., has been incorporated in Louisville, Ky., by J. C. Eisenman, Jacob Krieger, Sr. and David Franz, Sr. Capital Stock \$50,000, to engage in milling, operating grain elevator, &c.

The D. Green Railroad Bridge and Tunnel Indicator Company has been incorporated at Covington, Ky., by Daniel J. Dalton, Derby Green and Galvil McDowell, of Cincinnati, Ohio. Capital stock is \$250,000.

A three story mill has been built at Clinton, Ky.

LOUISIANA.

Thielman Brothers, of Baton Rouge, have established a ginnery and press at Plaquemine, La.

A new rice mill will be erected in Plaquemine, La.

The Plaquemine Lumber & Shingle Co., Plaquemine, La., have added a saw mill to their shingle mill.

The machinery for the ice factory at Donaldsonville, La., previously reported to be erected by Henry Cook, has arrived.

Mr. Garrett will probably lease his foundry near Franklin, La., to a Northerner.

Charles H. Walker has erected a three-roller mill on his plantation at Terre Bonne, La.

An electric light company, with capital of \$30,000, has been organized at Shreveport, La.

MARYLAND.

Henry Reckord & Son, Reckord, Md., contemplate building a fertilizer factory, but have not decided on location yet.

The Baltimore Cider Vinegar Company, capital stock \$6,000, has been incorporated in Baltimore by Theo. F. Hall, L. J. Cromwell, and others.

The United States Electric Lighting Co., capital stock \$250,000, has been incorporated in Baltimore by James R. Clark, Charles F. Dieterich, W. Lorman Roberts and others, to manufacture electricity for illuminating purposes, power, etc.

John R. Day, and Wm. Enfield are building a large grist mill near Prospect, Md.

Irwin Buck & Co., Baltimore, whose factory is reported in this issue as burned, will rebuild at once.

F. Lewis, Day P. O., Md., is preparing to erect a grist mill.

NORTH CAROLINA.

H. H. Reynolds, Winston, N. C., has contracted for the erection of a 5 story tobacco factory, 53x130. Will put in full supply of machinery.

G. V. Lichfield & Co., Waynesville, N. C., have about completed their band saw mill previously reported.

The Randleman Manufacturing Company, Randleman, N. C., previously reported as intending to rebuild their cotton mill, have commenced work on their building, which will be 80x140 feet.

B. F. Rodman, proprietor of the Washington Iron Works, Washington, N. C., will enlarge machine shop and add a foundry.

A. T. Robertson, Durham, N. C., proposes to build a hotel near Blowing Rock, N. C.

It is reported that the Richmond & Danville Railroad will build a large hotel at Warm Springs, N. C.

The New Garden School, New Garden, N. C., will rebuild a house lately burned; loss \$21,000.

E. J. Armstrong, Asheville, N. C., has contracted for the erection of a \$20,000 hotel at the Haywood White Sulphur Springs.

It is reported that a large steam distillery will be started at Salisbury, N. C.

Sheton Siceloff, of Midway, N. C., has purchased the Sparger Mill property, Mt. Airy, N. C., and will, it is reported, erect a saw mill.

A. R. Denison is making improvements at his mill, New Berne, N. C.

William Hooper & Son will erect a cotton gin at Mountain Island, N. C.

Goodwin & Hiss, Raleigh, N. C., previously reported as intending to manufacture wire fencing, have organized the North Carolina Wire & Picket Fence Co.

Two tobacco factories are to be built in Salisbury, N. C. One by Henkins & Sons, of Danville, Va., and one by Mr. Thomaston, of Franklinton, N. C.

SOUTH CAROLINA.

The Standard Manufacturing Co., Charleston, S. C., expect to add to their facilities for manufacturing barrels, kegs, &c.

The Mason Cotton Harvester Co., of Sumter, S. C., are contemplating the erection of works in Charleston for manufacturing Mason's cotton picker.

W. F. Claussen, Mar's Bluff, S. C., has established tile works.

The new pottery works at Aiken, S. C., have commenced manufacturing.

TENNESSEE.

Bogle & Davis, Winchester, Tenn., whose flour mill was lately burned, contemplate rebuilding.

The Brush Electric Light Co., Chattanooga, Tenn., will increase their motive power.

A coal mine near Graysville, Tenn., will be developed.

Campbell & Rosser, Denmark, Tennessee, have purchased an old mill site, and will establish a saw mill and gin.

M. S. Dick & Son, New Market, Tenn., have established a collar factory.

J. Warnes has leased the Ashwood Mills at Mossy Creek, Tenn., owned by S. G. Sanders. It is contemplated to put roller machinery in the mill.

The International Dredging and Contract Company, capital stock \$5,000,000, has been incorporated at Nashville, Tenn., by Rufus Ingalls, Albert L. Blackman, James A. Simmons, Amos Rogers, John Hoyt and William C. Dexbury, all of New York, to do a general dredging and construction business, light cities, &c.

Hardwick Bros., Dalton, Ga., will move their spoke factory to Cleveland, Tenn.

Merman Pope is moving his saw mill to near Bascom, Tenn.

M. H. Ward will double the capacity of his pork-packing establishment at Chattanooga, Tenn.

T. H. Cheek is prospecting in middle Tennessee with a view to erecting a large mill.

The Rcane Iron Company, Rockwood, Tenn., have commenced work on one of their furnaces, which is to be repaired and remodeled.

J. J. Craig, Knoxville, Tenn., will erect a lumber and marble mill.

W. J. Rushton, Birmingham, Ala., will probably have the management of a 30-ton ice factory, to be built in Nashville, Tenn.

TEXAS.

The contract for grading the balance of the San Antonio & Aransas Pass Railroad (office San Antonio, Texas,) has been let.

A flour mill is being built at Keller, Texas.

A \$15,000 flour mill and \$20,000 hotel are to be built at Montague, Texas.

Vernon, Texas, will build a court house.

A \$30,000 grain warehouse is to be built in Dallas, Texas.

L. A. Ellis will erect a \$40,000 house at Austin, Texas.

The El Paso Water Power Irrigating Company, capital stock \$300,000, has been incorporated at El Paso, Texas.

The contract for the Abilene, Texas, water works has been let to Grosscup & Keith of that city.

The Paris Oil Works, Paris, Texas, have been enlarged.

VIRGINIA.

Moorman & Bro., Lynchburg, Va., will erect a 5 story brick building to be used as a tobacco warehouse and factory.

J. H. Lerner has leased Manganese property, near Goshen Station, Va., which he will develop.

New machinery for use in the Pocohontas, Va., coal mines has been ordered.

LOCKWOOD, GREENE & CO. MILL ENGINEERS

Office, 65 Westminster St., Providence, R. I.

Carefully prepared plans, specifications and estimates furnished for the construction, equipment and organization of new mills and the revision and improvement of old.

A firm has been organized in Richmond, Va., as B. D. Chalkley, capital \$20,000, to engage in tanning, &c.

The American Manufacturing Company, iron founders, St. Paul, Minn., contemplate removing South, and desire a good location.

BURNED.

Saw mill of John Zimmerman, Looney, Virginia.

Union Point Flour mill, Union Point, Ga.

Flour mill of John E. Rowland, Hagerstown, Md., occupied by Aiken & Co. Loss about \$15,000.

The flour mill of J. Wilford & Bro., Bowling Green, Ky., was damaged by boiler explosion.

The following Baltimore firms have been burnt out or damaged by fire during the past week.

F. G. Lindy & Bros., saw and planing mill; loss \$8,000.

B. F. Sparklin, cornice manufacturer; loss \$2,000.

Irwin, Buck & Co., desk manufacturers; loss \$15,000. Will rebuild at once.

Samuel G. Taylor, machine shop; loss \$8,000.

Gosnell & Co., and the Baltimore Coffee Polishing Company.

The tile factory of Edwin Bennet, Baltimore, damaged \$3,000 by fire.

J. Schwartzwalder & Son's stove factory, Ninth street, Louisville, Ky. Loss on machinery and building \$15,000.

Saw mill of J. P. Wheeler, Franklin, Tenn.

Ax and hatchet factory of W. C. Kelly, Louisville, Ky. Loss is \$30,000. It is reported that the factory will be rebuilt.

Steam saw and grist mill of Wm. Bozone, in Choctaw county, Ga.

Grist mill, ginnery, and saw and planing mill of Reuben Morgan, Cross Plains, Ala.

Saw mill of S. M. Winchester, Newport, Tenn., damaged by boiler explosion.

Gin house of Brim & Bro., Terrell county, Ga. Loss \$2,000.

Big Saw Mill.

BURNSIDE, KY., August 31st, 1885.

Editor Manufacturers' Record:

We are constructing a new mill—main building, 50x100 feet, boiler shed 34x60 feet—main building 2 stories and very substantial. Will be ready to run by Oct. 1st. Capacity will be from 50 to 75 M per day.

KENTUCKY LUMBER COMPANY.

Contemplate Rebuilding Mill.

WINCHESTER, TENN., Aug. 30, 1885.

Editor Manufacturers' Record:

Our mill was burned on the 14 inst. We hope to rebuild soon. We had a four-run mill with splendid water-power; the finest in the country. A good dam, splendidly located, and in a fine country. Would sell the site with 110 acres of land. If we don't sell, will build a three-run mill with all late machinery. BOYLE & DAVIS.

Will Purchase Mining Machinery.

LOUISVILLE, KY., Sept. 4th, 1885

Editor Manufacturers' Record:

The Golden King Mining Co. has been organized under the general laws of this State, with an authorized capital of \$500,000, of which \$100,000 is to be paid up prior to commencing operation, which amount will be full paid up within this month. The company have five valuable mines and propose putting in all necessary machinery to operate them successfully. A committee have the matter in hand and will make full and personal inspection and report within three months.

GOLDEN KING MINING COMPANY,
CHAS. P. LONG, Pres't.

Carriage and Buggy Factory.

ELBERTON, GA., Sept. 3, 1885.

Editor Manufacturers' Record:

Messrs. Clark & Adams will add to their machine shops, carriage and buggy shops. SWIFT BROS.

Wagon and Carriage Factory.

WALDO, FLA., September 4th, 1885.

Editor Manufacturers' Record:

Mr. D. Hicks of this place has established a wagon, cart and carriage factory here. ROBT. W. CAMPBELL.

Building Mills.

LAKE DE FUNIAK, FLA., Sept. 4, 1885.

Editor Manufacturers' Record:

A sash and door factory will be built in a short time by C. H. Dixon, from Pensacola, Fla. There are two saw mills here and another building now. It is owned by J. D. Gray; will be a large mill 100 horse power. G. D. McSWAIN.

Grinding Machinery Needed.

MONTGOMERY, ALA., Sept. 5, 1885.

Editor Manufacturers' Record:

We now have an ochre mill in operation about nine miles from this place; are turning out goods equal to the best yellow ochre in the United States, or even French. We think of increasing our capacity by putting in a new mill for grinding, but have not as yet found a mill suitable, as to capacity or fineness. We also have in anticipation the building of works to manufacture mixed paints, &c.; have not the plans for this latter yet, so cannot specify size, &c. Are in correspondence with makers of machinery for said purpose. ALABAMA OCHRE CO.

Will Build Foundry.

WASHINGTON, N. C., Sept. 5, 1885.

Editor Manufacturers' Record:

Increase of business has forced us to enlarge our shops. Expect to have a foundry in operation by January 1st, 1886.

WASHINGTON IRON WORKS,
B. F. RODMAN, Prop.

Rebuilding Large Cotton Mill.

RANDLEMAN, N. C., Sept. 7, 1885.

Editor Manufacturers' Record:

We have commenced the rebuilding of our cotton mill, and hope to have it ready for the machinery by the 1st of November, and want to be spinning by December. I am building a one story mill, 80x140 feet, and building to avoid fires, putting in hydrants on outside, so we may be able to get as good rate of insurance as is going.

JOHN H. FERREE, Treas.

Building a Machine Shop.

WINCHESTER, KY., Sept. 5, 1885.

Editor Manufacturers' Record:

We are erecting a machine shop here. Intend to put in necessary machinery to do all kinds of repairing and building with. We are not putting up foundry as yet, but intend to as soon as possible.

KING & CO.

Good Opening for Pork Packing.

BRISTOL, TENN., Sept. 7, 1885.

Editor Manufacturers' Record:

In conversation with General Imboden recently, he remarked that Bristol is one of the best sites in the United States for a large pork-packing establishment. If pork packers having an "eye to business" will come here and investigate, we will furnish them with such data as will convince them conclusively that there is a splendid opening here for such an enterprise.

HOBSON & D'ISAY.

Learning by Experience.

The people of Georgia have learned by experience that their railroad commission, instead of proving a great help to them as its advocates claimed it would, has proved a curse to the State and they are now moving vigorously to have it amended so as to abolish its most objectionable features. They see now that it has kept millions of dollars out of the State, and that it is useless to look for increased railroad building in Georgia while this commission continues to exert its present despotic powers. The MANUFACTURERS' RECORD has steadily and persistently opposed the arbitrary railroad laws that for a time were so popular in the South, and the decided change of sentiment, now so noticeable in Tennessee, South Carolina and Georgia, the three States in which this subject has attracted most attention, is very gratifying. Some of the strongest champions in Georgia of the railroad commission in that State when first established have very wisely come to the conclusion that it is working great injury to the best interests of the State. They cannot shut their eyes to the fact that capitalists will not invest their money in enterprises, the control of which is absolutely taken from them by law. Georgia has suffered from this and will continue to suffer until her legislators relieve the railroads of the iniquitous laws that now control them. Iniquitous they certainly are, for assuredly a man has the right to have some say in the management of his own property, but this right has been virtually taken from him, if his property consists of a railroad, by the State of Georgia.

Tennessee tried the railroad commission business for a while, but she very sensibly dropped it, and unless forced upon her again by political schemers there is not much danger that that State will experiment in this line any more in the near future. Now that Georgia has become aroused to the importance of curtailing the power of her commission, it behooves the people of South Carolina to be moving in the same direction.

The Southern States cannot afford to discourage the investment of capital in any enterprise calculated to aid in the development of their resources. Of all sections it most needs the help of outside men and money, and this can only be secured by liberal dealing. It is to the railroads and those interested in them, that much of the wonderful progress of the last five years in the South is due, and upon them depends the future development of the South's great agricultural, mineral and timber resources. Since 1879 over \$400,000,000 have been spent in the improvement and development of the railroad interests of the South. This vast sum has very largely come from outside capitalists. The good it has accomplished for the South is almost beyond measurement. Instead of legislation being unfriendly to

those who own, and to those who would build railroads in the South, it should give every possible encouragement to them.

There is no denying the fact that many capitalists are disposed to look upon the South with suspicion, and would much prefer to invest their money elsewhere than in that section. This feeling must be overcome. Legislative action has much to do with it, and this very railroad matter has been the cause of very much of it. If the States that now have unjust laws regarding the management of railroads will abolish them, and thus allow railroad owners the same privileges regarding the control of their property as are afforded to all other classes of property holders, the South will make a great advance in attracting the favorable attention of capitalists, and thus very materially benefit every interest of the whole section.

Large Tobacco Factory.

SALEM, N. C., September 4, 1885.

Editor Manufacturers' Record:

We have contracted with H. H. Reynolds, of Winston, N. C., to build a large tobacco manufactory. The building will be of brick, 53 feet wide, 130 feet long, 5 stories high. He will put in a steam engine and first-class machinery. He is an old manufacturer but wants larger quarters. FOGLE BROS.

Will Build a Saw Mill.

WILLIAMSPORT, PA., Sept. 5, 1885.

Editor Manufacturers' Record:

We intend to erect a steam saw mill near Calera, Alabama, the latter part of this fall. CONNOR & CO.,

No. 11 N. Grier Street.

A FEW days ago we were shown some exceedingly fine specimens of gold ores that were obtained at the Young and Propes mines, in the lower part of this county. These mines were worked to some extent 30 or 40 years ago, but on account of the very rude machinery used and the difficulty of lifting the water to drain the vein, were abandoned. Those who have known these mines best, however, have continued unshaken in their opinion that they are rich in the precious metal. A few weeks ago Messrs. J. H. Summerour, J. E. Strong and E. H. Gibbons, experimenters and mineralogists, decided to open these mines and see for themselves whether the fabulous stories told of their wealth were true or false. With this purpose in view, these gentlemen went to work to open the old shafts and uncover the vein. In due time this was done, when all that the most sanguine expected was more than realized. The ores obtained not only showed up handsomely by the ordinary tests, but a large proportion of it was specked and dotted with the yellow metal, which could be seen at a distance without the aid of a glass. The specimens which we saw were, most certainly, marvelously rich. How rich we have no means of ascertaining, but it would doubtless run to several hundred dollars per ton. The ledge barely comes to the surface, and, without exception, is pronounced, by those who have examined it, a fissure vein. From our knowledge of these mines and from the samples of ores exhibited, we feel sure that when worked by skillful miners, and with improved machinery for crushing the ores and modern appliances for saving the gold, they will prove to be bonanzas. We congratulate the gentlemen in charge on the bright prospect ahead, and wish for each the largest measure of success. —Gainesville (Ga.) Eagle.

Car Wheel Boring Mill.

With the growth of the cast-iron car wheel industry in the United States, there has been a steady improvement in the machinery for boring the wheels, and also in the machines for turning axles.

In regard to boring car wheels, it is to the firm of William Sellers & Co., Philadelphia, that the credit is due of introducing the system described at some length in their "Treatise on Machine Tools," viz: Of taking out the bulk of the metal on the roughing cut with a deep cut and a moderate rate of feed, and then finishing by means of a light cut, hurried through the wheel as rapidly as the nature of the material will permit. In other words, the general principle applicable alike to boring, turning and planing metals, of finishing by a very broad feed but shallow cut, so as to give the finishing tool as little as possible to do, both in work and in time, has been kept constantly in view by this firm, and made readily applicable in the feed mechanism of their various machine tools.

They say: "The finishing cutter, having but little to do, does not wear away very rapidly. In fact, its deterioration depends more upon the time taken to run it through the wheel than upon the amount of metal removed by it. A fine feed on the finishing cut wears the tool more than a quick one. The coarser the feed, within reasonable limits, the longer the cutter will remain to size."

This company have, from time to time, issued new forms of car wheel boring machines, in all of which the power feed has been so arranged as to be readily shifted from the comparatively fine feed needed in the running out, to the coarse feed they recommend for the finishing cut.

The engravings illustrate a new car wheel boring mill made by them, in which they claim to have introduced many very important improvements, which facilitate the handling of the wheels, and enable a greater number to be bored per day, as well as to make the boring more perfect.

Fig. 1 shows the machine on the side to which the power crane is attached. The crane is driven from the cone pulley shaft in the machine, and therefore no extra counter-shaft or extra belt is required to operate it. The rod A, which operates the starting and stopping of the crane hoist, is provided with two handles; one to be used when the attendant is at the front of the machine, the other close to the upright of the crane, to be used when he is at the side or near the back of the tool, as when he is lifting a wheel from the floor. The crane is provided with an automatic stop at top and bottom of its hoist, so that it cannot over-run in either direction. No special care is required on the part of the workman who is operating it. The ball lever, B, operates a clutch on the driving shaft of the table, to enable the table and the feed motion to be stopped without stopping the motion of the cone pulley or of the machinery in the upright that actuates the crane. Fig. 1 shows the crane as attached to a wheel ready for removing it from the mill, and it shows also that the vertical slide has sufficient motion to carry the boring bar up out of the way of the wheel to be lifted from the chuck.

Fig. 2 shows a wheel in place for boring, and exhibits on the side opposite to the crane the train of gearing that operates the feed. The balance wheel C, at the upper end of the feed train, is used to raise or lower the balanced vertical slide and boring bar very quickly by hand when the feed is not in gear, and the handle D serves to instantly start or stop the power feed. In the feed motion train will be observed at F a set of the discs of their "improved friction feed," the movable disc, F, being set to any required position, and at the same time clamped to place by a

handle shown at E, close to the balance wheel C. The range of feed obtainable by means of these discs, on this machine, is from 1-16 inch for the finest feed, to over 1 1/4 inch feed for the coarsest, or finishing feed, while the range of feeds between the two extremes is practically unlimited. The vertical slide H has a projection, I, at its lower end, close to where the boring bar is attached. This projection carries a slide-rest which holds a tool for facing, so arranged as to serve as a fixed tool in dressing off the narrow facing strip on car wheels, or the facing tool can be carried out, fed by hand, over the face of the wide hubs, which must be dressed for locomotive truck wheels. The cut in such case starting in the already

opinion as to the great advantage to be derived from the use of broad, flat surfaces for the slides of machines; particularly when the function of the slide is, as in this case, to resist strains tending to rotate the sliding part.

The machine is shown provided with William Sellers & Co's own arrangement of four cutting edges to the boring bar, the two cutters giving these four cutting edges being clamped to place independently, and each as readily shifted as a single cutter.

An important feature in this machine is that the workman standing directly facing the upright can with his right hand start, stop or regulate the feed, while with his left hand he can readily start and stop

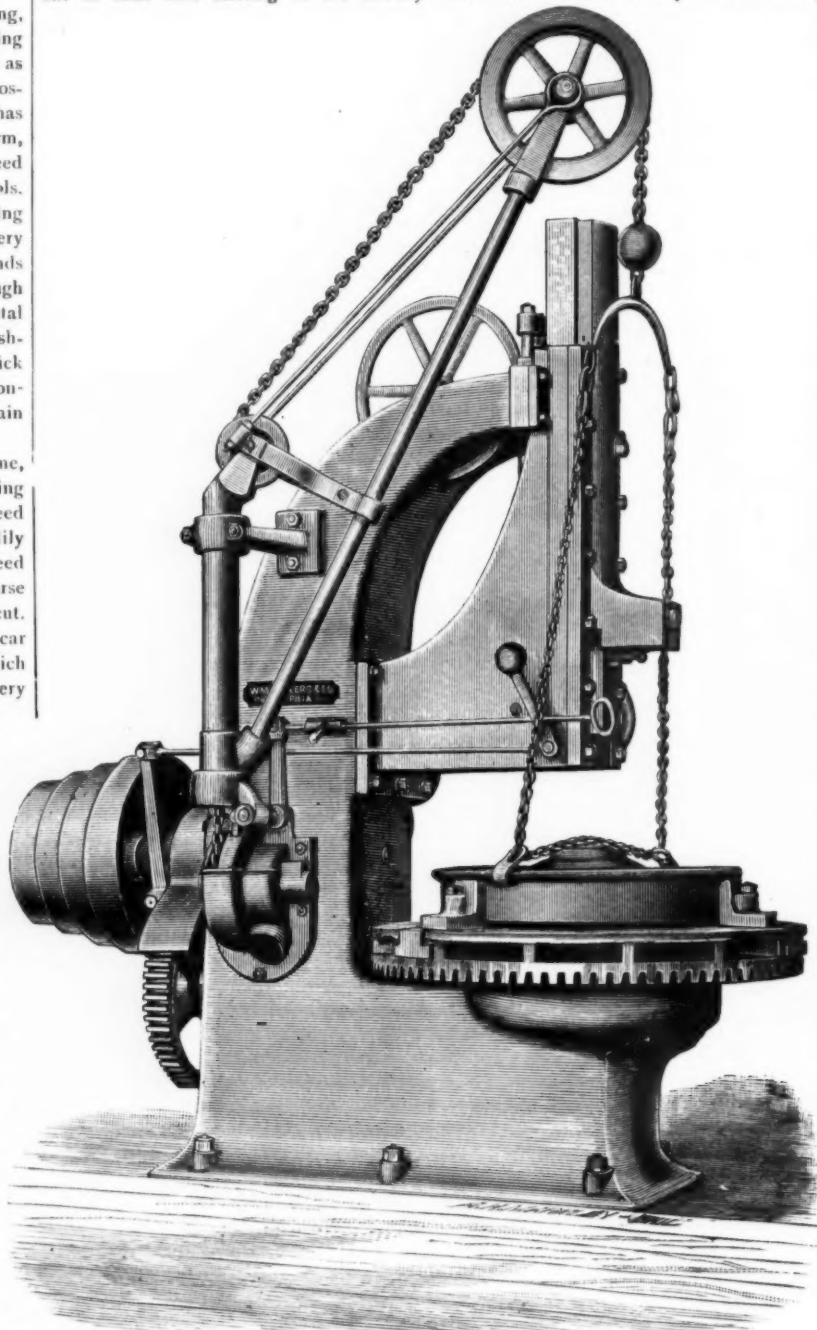
jaws, which, when made as shown on the cut, will take in wheels up to 36 inches diameter; but as the face-plate is large enough to carry general work up to 50 inches diameter, they adapt chuck jaws to wheels of 42 inches diameter when ordered. The table is carried by a circular tongue fitted in a groove with wide wearing surfaces and ample provision for oiling. All the working parts are said to be fended from dirt below the table by guards that carry the chips into a pit below the base of the machine.

The Cheerful Prospect.

This season gives promise of greater prosperity than the South has known for many years. With a splendid federal administration, and no disturbing political possibilities under it or our State governments; with nothing to disturb the regular current of business; with unsurpassed crops of every sort to be used at home or sent abroad, everybody certainly may find reason to look forward to a season of prosperity which must certainly bring rich returns to those who have the energy to take advantage of opportunities. Never before have we had such crops in Texas—enough grain made to last eighteen months, or, more reasonably speaking, enough extra grain to fatten this winter two hundred thousand first-class beefs, and any number of muttons and hogs, and a cotton crop of at least seventeen hundred and fifty thousand bales, worth at the lowest estimate \$70,000,000. But the prospect in Texas is only similar to that of every other Southern State. The cotton crops of all the States is estimated at seven million bales, worth at least \$280,000,000, with grain and potatoes and fruits enough everywhere to answer all purposes and to spare. The rice crop is reported above the average and the sugar crop is said to be superb. With all this splendid prospect it is known the people are freer of debt than at any time since the war. Our farmers have every year been growing more thrifty, and have grown less and less inclined to contract debts. The people will possess more cash than ever before, and they will have to pay less out. Certainly the prospect is grand. Commercial centres look forward to times of great activity. Soon the railways will begin to move the enormous cotton crop, and commerce will assume a condition not before equaled, adding prosperity to all classes of society. After long days of distress comes this morning of cheerful prospect. Hope is revived and gives birth to new enterprises and improvements. The blessings that flow in upon us are already having their effect; distress will disappear, plenty will prevail, and the season of 1885-6 will long be remembered on account of the new era of prosperity opened to the people of the South.—Austin, Texas, Statesman.

THE TEXTILE MANUFACTURERS' DIRECTORY OF THE UNITED STATES AND CANADA for 1885 has just been issued. This valuable work gives a list of all the woolen, cotton, silk, jute, flax and linen manufacturers, dealers and brokers in raw material, dry goods, commission merchants, &c., in this country and Canada. It also gives important particulars regarding each mill, amount of machinery, P. O. address, &c. H. H. Babcock, 320 and 322 Broadway, New York, is the publisher.

JAMES LEFFEL & Co., Springfield, Ohio, have published a very handsome catalogue of 128 pages, devoted to illustrating and describing their well-known water wheels and the various uses to which they can be advantageously put. This book also contains a large amount of valuable information relating to the use of water power, water wheels, &c.



CAR WHEEL BORING MILL—FIG. 1.

bored hole, and thus getting under the scale of the casting. An adjustable gauge-bar K, attached to the side of the frame that supports the vertical slide, can be set by means of its collar and set-screw to any height of the hub above the flange gauge of the tread, and the finger at the lower end of this bar, lowered down for this purpose, serves to indicate when enough metal has been removed from the hub.

It will be observed that the vertical slide is made rectangular, and gibbed to place with broad, flat, guiding surfaces, and the makers say that it "is made of this shape to stand the great strain brought to bear in boring, with the least liability to wear, or to be set out of concentricity with the axis of the table;" and furthermore, that they "are confirmed in the

the rotation of the table, or work the crane. He can thus control the machine in all particulars from one place, and loses no time in needless running from one side of it to the other.

Some idea of the speed and power of the machine can be gathered from the statement made by the makers, that they have, on their trials of the tool, run the four-cutter bar through the master car-builders' standard size of hole at the rate of 5-16 inch feed to the revolution on the roughing cut, enlarging the hole half an inch in diameter, and have finished the same hole with a feed of 1 3-8 inches to the revolution. In another case, the rough hole, 3 1/2 inches, was bored to 4 13-16 inches, and 0.655 inch on each side, with a feed of 1-6 inch to each revolution. The fire-plate, or revolving table, is arranged with a concentric chuck, with three

Iron Ores of the Anniston District.

When the mere local announcement is made that some furnace, either at Birmingham or Chattanooga, has contracted with ore raisers here for the delivery of a certain number of cars of this ore to them daily it scarcely attracts attention, but such an announcement has a world of significance and interest in it. The two towns mentioned are undoubtedly embraced in the greatest iron manufacturing districts of the South, from the fact that the furnaces around them are pioneers in the business and received years of attention and careful study before the new furnaces in our iron district were erected. Consequently they have the run of trade, but it is quite obvious that our furnaces are making a better quality of iron and are rapidly coming into strong competition with these old established furnaces. The reason our furnaces are making a better quality of iron is because the ores here are the finest ever discovered in the South, and the furnaces to which we have alluded see that it is necessary to supplement their ores with the ores in the Anniston iron district in order to meet the competition of our furnaces. The furnaces here are making a very superior quality of iron, and it is being readily sold in the great iron centers of the North and East. Those with an abundance of experience, and whose pecuniary interests it is to oppose Anniston and its surroundings, are candid enough to confess that the ores, included in what is known as the Anniston iron district, are the finest ever discovered in the South, and as a clincher to such a confession are taking away no less than twelve or fifteen car loads of it per day to use in their own furnaces.

Sooner or later these potent facts are bound to attract the attention and money of capitalists. If these ores are needed why not plant the furnaces right here and save such an immense item in freights? That this will be done does not admit of a doubt, and in the next ten years we may expect to see the chimneys of two dozen furnaces lifting their heads in the Anniston iron district, the interests of all centering here and enriching the Model Young City of the South.—Anniston, Ala., Watchman.

Location for Pottery Wanted.

EAST LIVERPOOL, O., Aug. 26, 1885.

Editor Manufacturers' Record:

We do not know as yet where we will locate. Are looking up a site for a pottery. Could you inform us of some opening for a white granite stone somewhere in the South?
J. Q. A. FOWLER.

MR. WILLIAM TRENHOLM, the accomplished commercial editor of the Charleston News and Courier, has favored us with the annual review of "The Trade of Charleston, S. C., 1884-85," republished from the News and Courier in book form. It is filled with statistics of much value.

SOME idea of the development of the iron sections of Alabama may be obtained from the fact that the present assessed value of property in Jefferson County, in which Birmingham is located, is \$11,079,619, an increase over 1884 of \$1,787,668, and over 1880 of \$7,651,704. This is what has been done in one county.

If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year, or six months for \$1.50.

Law Department.

Edited by B. HOWARD HAMAN, Attorney at Law, Baltimore, Md.

It is the province of this Department to reply to enquiries that may be made by our patrons respecting the legal aspects of any matter that may arise in their business. Any questions as to doubtful points of law will be answered without charge in this column. All questions submitted must be accompanied by the name and address of the sender, not however, for publication. Letters should be addressed, Editor Law Department, MANUFACTURERS' RECORD.

NEW YORK, Sept. 7, 1885.

Editor Law Department,

Manufacturers' Record:

Dear Sir—I would like to put a question to you, in order to know whether I should send my case to a lawyer in your city, or simply "charge up" my loss. The facts are as follows: I sent, or my firm did, to a firm of Baltimoreans engaged in selling the class of goods we manufacture, a large lot of these goods to

is certainly worth trying, on your statement. You ought to replevy the goods.

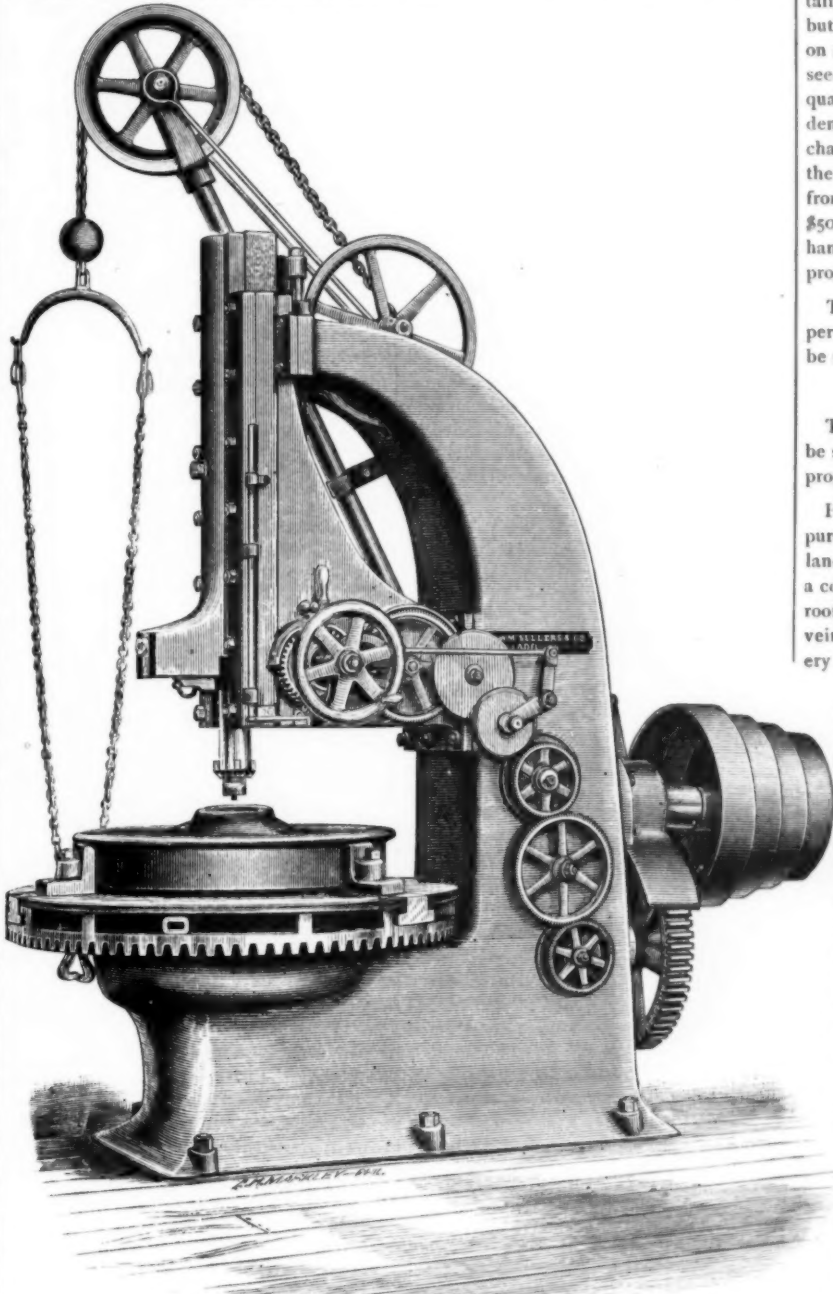
PASSAIC, N. J., Sept. 5th, 1885.

Dear Sir—Wine shipped by me was removed from the packages in which I sent them, and after being put into new vessels was sold, the vessels being furnished by the purchaser. Now, the wine is mine, but the vessels belong to another person. Where is my remedy?

Reply—Seize the old wine and new vessels, and fight it out for the ownership, if the loss is a large one. If the loss is slight, do nothing at all now, but pick your consignees.

Legal Jottings.

Distress for Rent. We see from the case of Waring vs. Slingluff (65 Md., 53) that they still have in Maryland, the common law abomination of distress for rent, though hedged about with some restraints which make it a more dangerous and difficult pastime for the landlord than in ancient times,



CAR WHEEL BORING MILL—FIG. 2.

be disposed of on consignment, and some goods we sold outright to the Baltimore people. This house was in fact our general agency for the sale of goods in your city. Some time after the receipt of the consigned goods, a member of the Baltimore firm took out of stock a very valuable article, removed it to his house, and there sold it. I cannot prove that the purchaser acted in bad faith, though I strongly suspect it. He gave about a fair auction price for the merchandise. I can find the goods. Do you think I should risk a suit here? My agents have failed.

Reply—Your question involves a very nice law point. Any sale of goods, though they be consignment goods, by an agent, made in the "ordinary course of business," is good against the defrauded owner, provided the purchaser from the agent acts in good faith. In the case you mention, the sale took place in a private house, and this is not in the usual course of business. Your case

when he could distrain anybody's cattle that happened to be in his tenant's field, whether they belonged to a tenant or to a stranger. Distress for rent is an infamous procedure, which came into vogue when England was run by landlords, when the tenant was but one grade above the villian, and had few rights which the landlord was bound to respect.—Central Law Journal.

Deed: Husband to Wife: Validity—A conveyance of land by a husband directly to his wife is effectual as against creditors, unless made to hinder or delay them as between the parties an equitable title is conveyed.—Supreme Court, Wisconsin. Wheeler & Wilson Manufacturing Co. vs. Manahan.

In the letting of a house (whether furnish-

ed or unfurnished) there is no implied contract or condition that it shall be habitable.—Supreme Court, District of Columbia, General Term.

MINING NOTES.

By BRUNER & EAMES, Salisbury, N. C.

BELLE MINE.

Situated 10 miles S. E. of Carthage in Moore county, is being operated by a Washington company, although the mine is the property of Harrison & Linton of Salisbury, N. C. The Washington company are making extensive arrangements to work the mine on a large scale. In the main shaft they have attained the depth of 110 feet on the vein which is composed of quartz in highly crystallized talcose slate. The ore is free milling but has never been worked up to its value on account of the fineness of the gold which seems to be in small scales on the lamina of quartz slate. Unless the present superintendent learns of some other method he will purchase amalgamating pans and settlers for the treatment of the ore. If taken directly from the vein this ore is said to be worth \$50.00 per ton. They employ about forty hands and have spent some \$10,000 on the property to date.

The Original Conrad Hill Gold and Copper Mining tract, containing forty acres, will be sold on the 18th of September.

THE CROWELL GOLD MINE.

This mine, situated in Stanly county, is to be sold soon to satisfy a mortgage. It is the property of Baltimore people.

Harrison & Linton, of Salisbury, have purchased 700 acres of remarkable mineral land in Moore county, on which are located a copper vein, 15 feet in width, a belt of fine roofing slate, beautiful white talc, and a vein of silver ore. They will erect machinery after they have closed other transactions.

N. B. McCandless, Superintendent of the Honeycutt Gold Mine near Gold Hill P. O. in Rowan county, was in Salisbury this week and exhibited the United States Mint's return for \$3,000 in gold from the Honeycutt.

GOLD KNOB.

They have moved the five stamp mill from this mine as it was not adapted to the treatment of the heavy sulphuretted ore which is in great abundance, there being eleven veins on the property. Mr. Frank Williams, of Salisbury, is owner, and it is thought will send the ore to the works of the Gadkin Mining and Milling Company.

Several new enterprises on foot in the State that will make great activity in mining during the winter.

METALLURGICAL WORKS.

Mr. John Jacobs, a thorough and very careful mining engineer of Philadelphia, is here in the interests of the Yaddin Mining and Milling Company of Pennsylvania. He has been visiting mines in the vicinity of High Point, Thomasville, Concord and Charlotte, where he has purchased ore for shipment to

the works near Salisbury. It seems that this must eventually be a great enterprise here, as Mr. Jacobs informs us that if he can purchase the quantity of ore necessary to supply a large works, his company will erect one here that will cost a large amount of money and give employment to 200 or 300 men, as they will be prepared to treat all classes of ore and manufacture sulphuric acid and fertilizers.

ADVERTISERS wishing to reach manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the BALTIMORE MANUFACTURERS' RECORD. We are always prepared to furnish proof of our claims as to circulation.

OFFICE MANUFACTURERS' RECORD,)
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Brush Electric Light Co., Baltimore, Md.
Ettrick, Matoga and Battersea Mfg. Co's.,
Petersburg, Va.
Rasin Fertilizing Co., Baltimore, Md.
Tanner & Delaney Engine Co., Richmond, Va.
Sibbey Mills, Augusta, Ga.

Graniteville Mfg. Co., Graniteville, S. C.
Charleston Bagging Co., Charleston, S. C.
P. H. Mayo & Bros., Richmond, Va.
Phosphate Mining Co., Beaufort, S. C.
Brush Swan Electric Light Co., Norfolk, Va.
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bus, Ga.
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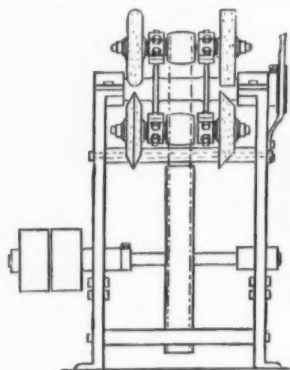


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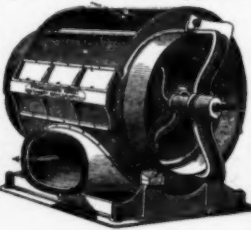
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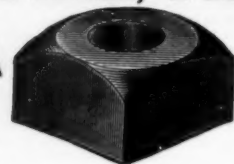
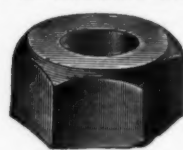
We manufacture these Cupolas of any desired capacity, numbered from 1 to 20, inclusive, the numbers indicating the melting capacities in tons PER HOUR—No. 1, one ton; No. 2, two tons; No. 3, three tons per hour, and so on up to 20, or 25 tons. We have improved the construction of these Cupolas in every way, have increased their strength and durability, and sought to make them as convenient for working and repairs as our own and the experience of our customers could suggest.



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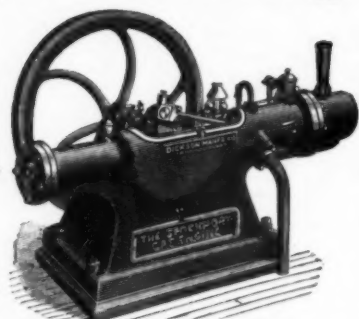
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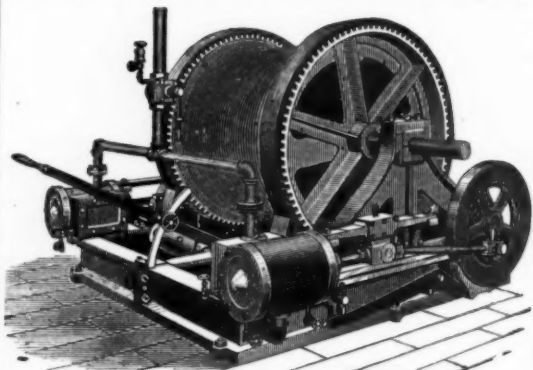
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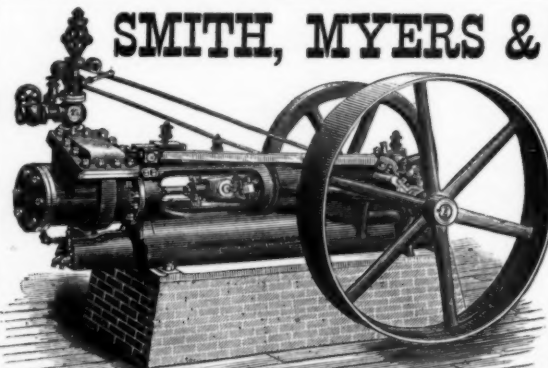
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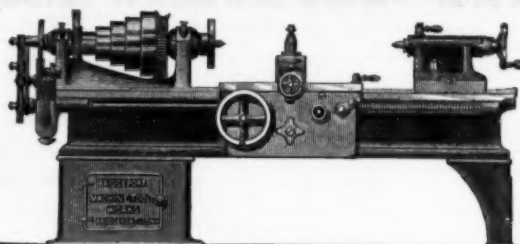
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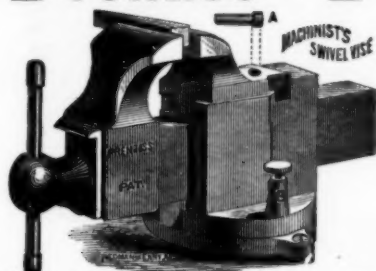
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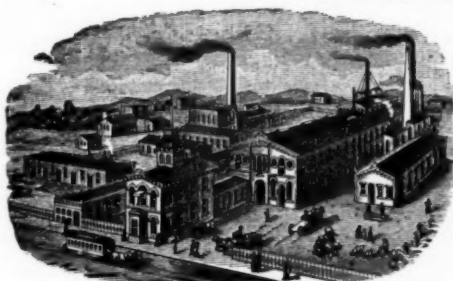
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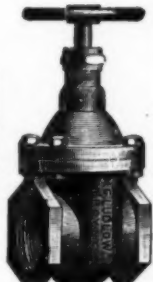
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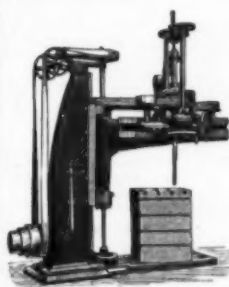
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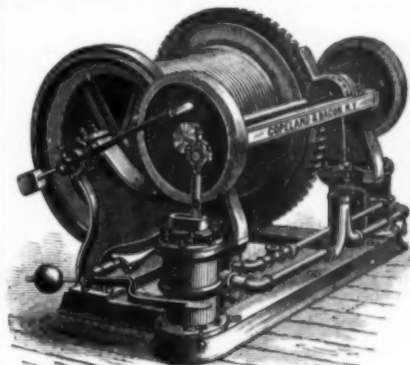
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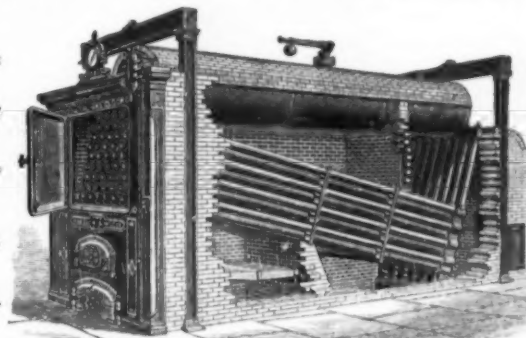
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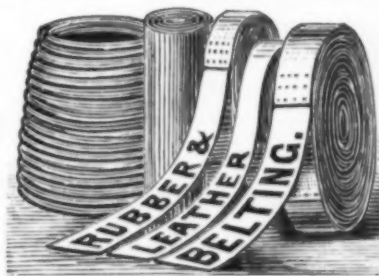
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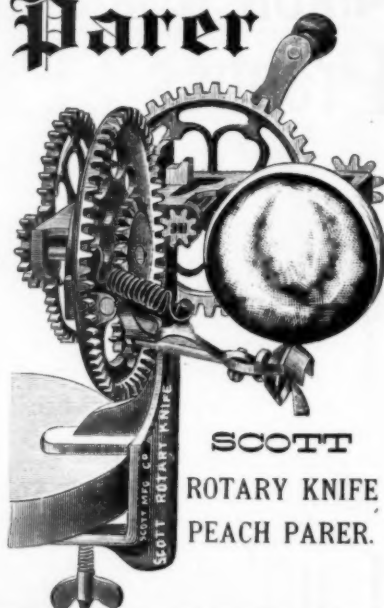
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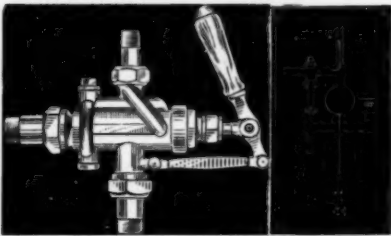
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For the purpose of making the **MANUFACTURERS' RECORD** a still more valuable medium of communication between its readers North and South, we will publish, **FREE OF CHARGE**, short advertisements, not exceeding 40 words, from those in the South who have mills, factories, manufacturing sites or water-power for sale, capital wanted for industrial enterprises, &c., &c.; while readers in other sections who desire to engage in manufactures at the South are also invited to use these columns, without cost, either in seeking information regarding the advantages and special claims of different localities, or for asking about good openings for men and money. This department is also free for Southern manufacturers who wish to advertise for mill managers, superintendents, engineers, &c. In corresponding with any of these advertisements please mention the **Baltimore Manufacturers' Record**.

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WANTED.—By young man, situation as assistant draughtsman with machine shop, mechanical engineer, mechanical draughtsman, or patent solicitor. Graduate of scientific school. Machine shop and engineering experience. Address A. W. Chase, No. 76 Washington street, Providence, R. I.

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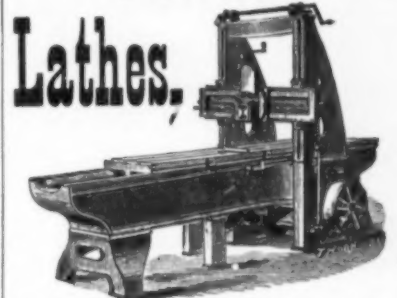


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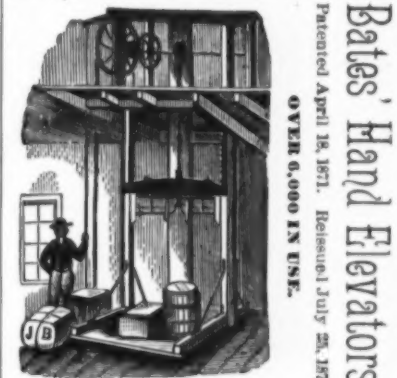
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Is doing a wonderful work for the South.—*Owensboro (Ky.) Messenger*.

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Cincinnati, 3/4, 1/2 doz.....	6 00
" 3/4, 1/2 ".....	7 00
RUBBER DUCK AND DRILL—35 % off list.	
SPRINGS.	
Seat, 1 1/2 x 26, 1/2 pair.....	90
Buggy, 1 1/2 in. and larger.....	8
1 1/2 to 1 3/4 in.....	9
Oil-tempered springs 2c. advance from above.	
MALLEABLE CASTINGS.	
Rate.....	8
Core.....	12
SHAFT AND FOLE COUPLINGS.	
H. B. LEATHER.	
No. 1 Top, 1/2 ft.....	28
" 2 " ".....	23
" 3 " ".....	12
" 1 Dash, ".....	10
" 2 " ".....	10 1/2
Fancy Morocco, 1/2 ft.....	26
Bow, 1/2 ft.....	20
Collar, ".....	24
Harness, 1/2 lb.....	40

Important.

Passengers arriving in the city of New York via Grand Central Depot, save \$3 carriage hire and transfer of baggage, by stopping at the Grand Union Hotel, opposite said Depot. Passengers arriving by West Shore Rail Road, via Weehawken Ferry, by taking the 42d street horse cars at Ferry entrance, reach Grand Union Hotel in ten minutes for 5 cents, and save \$3 carriage hire. Passengers arriving at Pennsylvania Depot, on reaching New York side, can take 6th Avenue Elevated Railroad at Cortlandt Street Station, and reach 42d Street Station, two blocks from Grand Union Hotel, in 20 minutes, for 10 cents, thus saving \$3 carriage hire. 600 elegant rooms, \$1 and upwards per day. European plan. Elevators, restaurant, cafe, lunch and wine rooms supplied with the best. Prices moderate. Families can live better for less money at the Grand Union than at any other strictly first-class hotel in the city. Guests' baggage delivered to and from Grand Central Depot, free.

COMMON SENSE ENGINES.

Simple, durable, economical, perfect, fully guaranteed, boilers and wrought iron. Send for illustrated Catalogue. Agents wanted everywhere.

From 2 to 10 Horse power; Roller, wrought iron.

Best CORN MILL in the World for plantation and farm purposes.

Stationary Engines from 6 to 100 Horse Power. Portable from 6 to 25 H. P.

COMMON SENSE ENGINE CO.
Springfield, Ohio.

Business Improvement.

There is at present writing every evidence of business improvement. Machinery business is never the first to feel the reaction after dull times, hence improvement is scarcely, in many instances not at all, felt in this branch. But it is clearly seen in textile and other industries, and has been felt long enough to warrant the assumption that it is not a mere spasmodic effect. It is impossible that business shall materially improve in a few of its branches without affecting the other branches. The gain will undoubtedly be slow, so slow as not to be noticeable from week to week. No one will be wise who expects a boom this fall or winter, but unless all ordinary signs fail, an era of better times has begun. The period of depression has taught men caution, so happily the rush of business beyond the bounds of any hopes of permanency is not under any circumstances probable. It will be infinitely better for the country that the increase be slow and sure than that it come with a rush to leave a calm behind it. But while cautious, it is plainly evident that there is everywhere increased confidence, which of itself will have a good effect in helping to restore business to a healthy condition. In the iron business we note that in some instances the wages of workmen have been increased, and that in this as in nearly all other lines the inclination towards further reduction has almost entirely ceased. This is a most encouraging sign, as with better wages, or reasonable evidence that further reductions are not impending, the great army of workmen, whose ability and willingness to purchase has a greater influence on general business than any other single condition, will buy more freely, and so assist in removing the brakes from the wheels of trade. There are in the iron trade industries, more inquirers; there is a fair prospect for business in steel rails, and most of the pipe mills are busy. Last, but of the first importance, the promise of good crops insures such a distribution of money as will spread the means of purchasing over all parts of the country. Let everyone take heart from the encouraging signs; if everyone goes to work as if the worst was over, we trust and believe that it will be found to be so.—*American Machinist*.

The Fastest Tunnel Driving on Record.

The fastest driving done yet on the New York aqueduct was accomplished during month ended August 15, at shaft 20, section B, under supervision of Messrs. Collins & Farwell and Foreman McLaughlin. In July the contractors, Messrs. O'Brien & Clark, issued the following notice, naming a prize, which was won by men of the above-named shaft. Machinery used, Rand "Slugger" Drill and Rand Air Compressors:

YONKERS, N. Y., July 6, 1885.

We have concluded to offer the foremen in charge of the tunnel on our work premiums of \$300 to the gangs making the fastest record for the month commencing July 15, 1885, and ending August 15, 1885, as follows, viz: \$200 first premium, \$100 second premium. The manner of deciding the greatest progress will be as follows: As near as possible uniform run be made of both bench and heading. Should the bench exceed the heading, then four feet of bench will count three feet of heading. In case the large timber sections are required, then the number of yards will be compared against the small sections, as above indicated.

The foremen winning the premiums will be at liberty to distribute them as they may see fit among their workmen. The record will be kept by J. Breuchaud and W. W. Hegeman.

O'BRIEN & CLARK.

The 24 miners who worked the north tunnel of shaft No. 20, in gangs of 12 men at a time, drilled and cleared 254 feet of heading, 8 feet high and 8 feet across the base, in the month named. It is said to be the fastest piece of mining work ever accomplished.—*Financial and Mining Record*.

The oldest paper of the kind published in the South. It furnishes the latest news and correct lumber quotations of all the Southern States. It is a feature never before represented by any other journal. Send for complete list of advertising rates furnished on application. Terms, \$2.00 per year; \$1.00 for six months. Address: SOUTHERN LUMBERMAN, Nashville, Tenn.

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FIRE

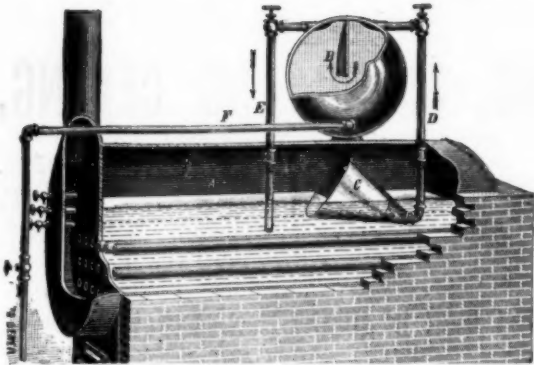
THE HOTCHKISS MECHANICAL BOILER CLEANER

Removes from Steam Boilers, Lime, Oil, Magnesia, and all other impurities of Boiler Water, and prevents *Scaling, Foaming and Burning*; but the object of this advertisement is to inform you that some

IMPOSTORS

in the South and West are offering Boiler Cleaners for sale as shown in cut on right-hand side below which is an old style of my cleaner. The cut on left side shows my improved style.

STEAM

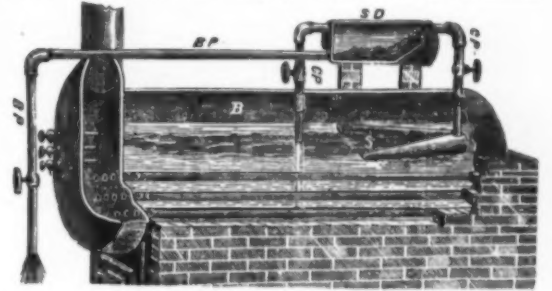


"HOW TO KEEP BOILERS CLEAN."

If you will send me your name I will send you an 88 page book, free of charge, giving useful information to Steam Users and Engineers. 65,000 already sent out and more to follow. The title of book is "HOW TO KEEP BOILERS CLEAN."

Compare this cut with one on left, and see if identical; the only difference being in shape of Skimmer and Drum.

S. D. Settling Drum. C. P. Circulating Pipe. B. P. Blow-off Pipe. S. Skimmer.

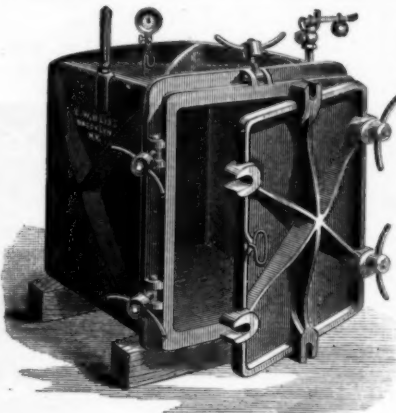


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MANUFACTURER OF

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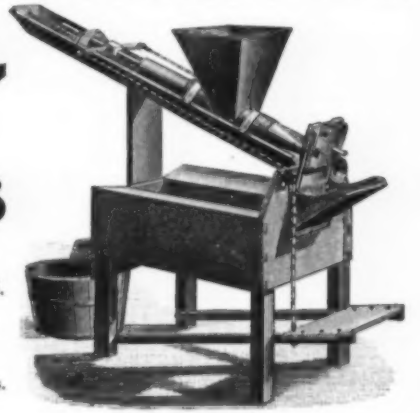
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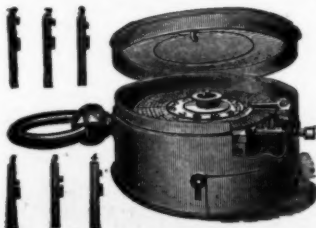
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Capable of controlling with the utmost accuracy the motion of a watchman or patrolman as the same reaches different stations of his beat. The instrument is complete in itself, portable, and as reliable as the best lever watch. It requires no fixture or wires communicating from room to room, as is the case with ordinary watch clocks.

The Instrument will in all Cases be Warranted Perfect and Satisfactory.

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Keep Your Steam Boilers Clean!

"An Ounce of Prevention Worth a Pound of Cure."

SAVE YOUR FUEL!

Warner's Purifier and Heater

[PATENTED JULY 21, 1885.]

The best way to *cure* your steam boilers of incrustation and sedimentary deposit is to *keep out* of the boiler that which causes incrustation and sediment.

The chief ingredients causing sedimentary deposits and incrustation are organic matter, carbonate of lime, sulphate of lime, carbonate of magnesia, sulphate or sulphuret of iron, and in salt water common salt.

The WARNER PURIFIER AND HEATER is the only machine which precipitates all impurities held in suspension, heats the water to the boiling point under full boiler pressure, separates and precipitates the mineral salts held in solution *before* the water reaches the boiler, and then injects the water thus purified into the boiler *boiling hot*. It is an automatic machine, entirely *outside* of the boiler, requiring absolutely no attention from the engineer except to blow off the accumulation of deposit from the bottom of the machine which acts as a mud-drum. All this is accomplished without the use of chemicals, by a purely mechanical process, regulated by the principles of natural philosophy.

No more "shutting down" of work to clean boilers—the machine does it all every day without interfering with the work, and by removing scale and preventing its formation, and heating the water to the boiling point *saves a large percentage* of fuel.

The WARNER HEATER AND PURIFIER COMPANY is now ready to furnish these machines on demand at very reasonable figures.

WASHINGTON, D. C., May 23, 1885.

This is to certify that I have made a careful examination of "Warner's Combined Purifier and Heater of Feed Water" in practical operation at the "Harris House" and "Post Building," in this city, and do not hesitate to pronounce it the *best* machine for the purpose ever invented. By its use the water goes into the boiler free from all impurities and heated to the boiling point under full boiler pressure, and as the result of the injection of pure water, the boiler is freed from scale and *kept clean*, while a large saving is made in fuel by the removal of the scale and heating the water to the boiling point *before* it enters the boiler. By the use of this machine the necessity of "shutting down" in order to blow out and clean the boiler is wholly obviated, as the impurities are all collected in the bottom of the machine, which can be blown out as many times a day as the engineer thinks proper without interfering with the workings of the boiler. I confidently commend this machine to all persons who own or use steam boilers, and am satisfied that its use will prolong the life of the boiler and make a handsome saving in the use of fuel.

(Signed) JOHN H. WILKERSON,

Inspector of Steam Boilers for District of Columbia, 220 7th Street, S. E.

"HARRIS HOUSE," COR. PENNSYLVANIA AVENUE AND E STREET, N. W.

WASHINGTON, D. C., June 23, 1885.

This is to certify that one of "Warner's Purifiers and Heaters of Feed Water" has been in use on one of the boilers of the Harris House, in this city, for three months, and has proved a perfect success. The boiler upon which the machine was placed was at the time covered with a heavy scale composed of animal and vegetable matter, lime, &c., which, by the use of this machine, has been entirely removed, the boiler being now as clean as when it came from the boiler-maker. This has been entirely accomplished, without the use of chemicals, by the injection of pure water through the "Purifier and Heater." This machine injects the water into the boiler heated to the boiling point under full boiler pressure, and by this means, together with the removal of the scale, results in a large saving of fuel. It is also *invaluable* in the purification of the water for laundry purposes. The machine is self-acting, and prevents the necessity of "shutting down" in order to blow out the boiler, as the impurities are all concentrated in the bottom of the machine, and can be blown out through the machine as often during the day as the engineer may deem advisable without interfering with the working of the boiler. I am convinced that its use will prolong the life of all boilers upon which it may be placed, save a large percentage of fuel, decrease the danger of explosion, purify the water for all purposes, and give general satisfaction. I confidently commend it to all hotels using steam and to owners of steam boilers generally as a much needed improvement that will do the work claimed for it thoroughly.

(Signed) JOHN H. HARRIS, Proprietor of Harris House, Washington, D. C.

WASHINGTON "POST" BUILDING, WASHINGTON, D. C., June 23, 1885.

This is to certify that one of "Warner's Purifiers and Heaters of Feed Water" was placed upon the boiler of the Post Building about 60 days ago as a test. At that time the boiler was covered with a heavy scale of animal and vegetable matter, lime, &c., which it was impossible to prevent. By the use of this Purifier and Heater, which injects the water into the boiler free from all impurities and heated to the boiling point, the scale has been removed and the consumption of coal reduced. The machine works itself and is invaluable as a purifier of water to all branches of business requiring pure water, such as hotels, laundries, &c., and a much needed adjunct to all steam boilers, prolonging their life, decreasing the danger of explosion and effecting a large reduction in the consumption of fuel. I confidently commend Warner's Purifier and Heater to all owners of steam boilers, being confident that their interests will be subserved by its use.

(Signed) J. FRANK MCGUIRE, Superintendent and Engineer Post Building.

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Hon. JOHN F. DEZENDORF,

Room No. 35 Corcoran Building,

—WASHINGTON, D. C.—

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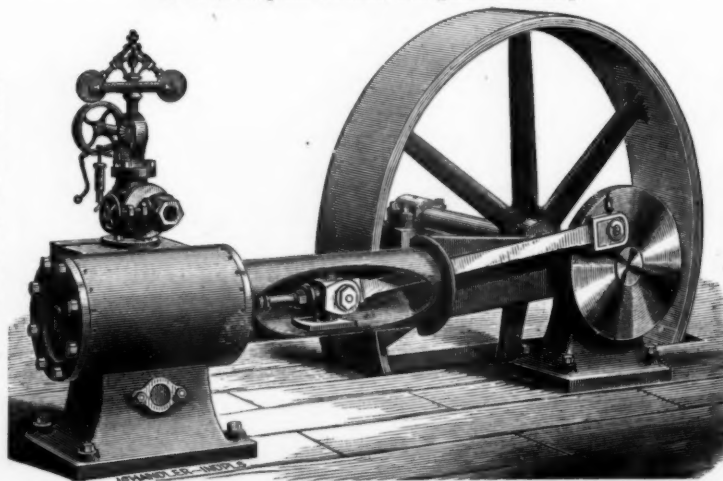
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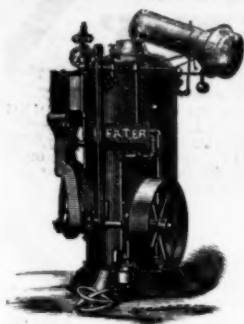
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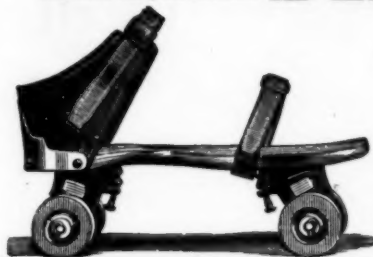
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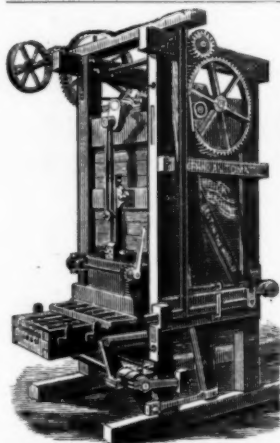


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It has no springs, rivets or pins to break, get loose or wear out. It will not crush the rubber cushion, as their new connecting plate prevents crushing. The wearing of the bearings being automatic, the truck frame will not become loose or rickety from long usage. The tension is easily regulated by means of the draw-bolt, to suit the requirements of any skater. The truck frame can be instantly detached without removing the draw-bolt. It is light, strong, durable, and skaters pronounce it the best skate made.

We especially call the attention of the skaters of America to our *New Half-Clamp Corrugated Steel Bottom Skates*, in which we pride ourselves in having the *Lightest, Strongest and Handiest Skate in the World*.

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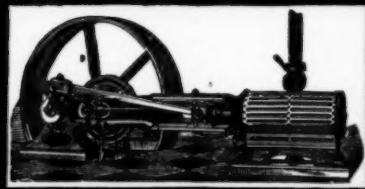
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The Grand Automatic makes the best tempered Brick in the world. It is the only Machine that makes better brick in every respect than can be made by hand. Send for catalogue to

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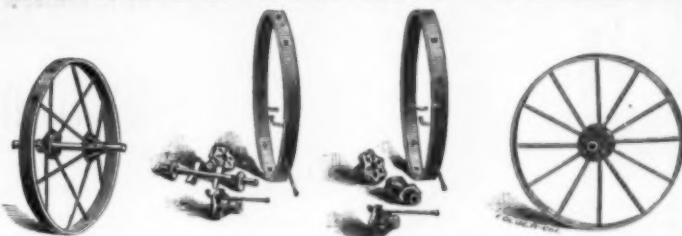
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J. F. MCCARTHY, Agents at 5th and Vine Sts., CINCINNATI, O.
SAM'L STEVENSON, General Ticket Agent.

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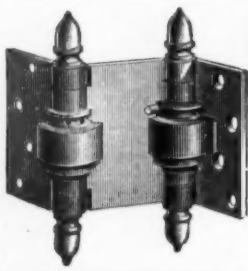
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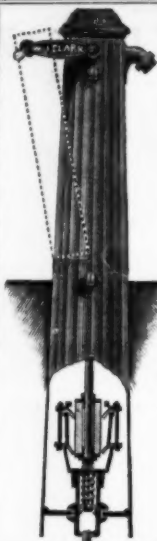
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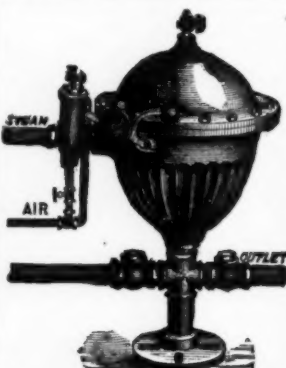
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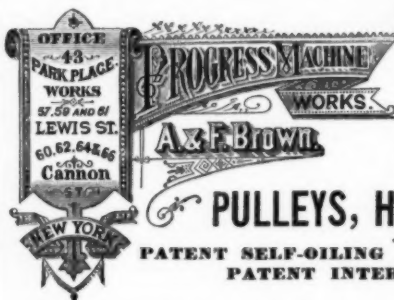
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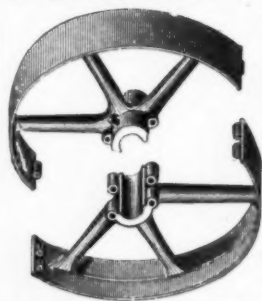
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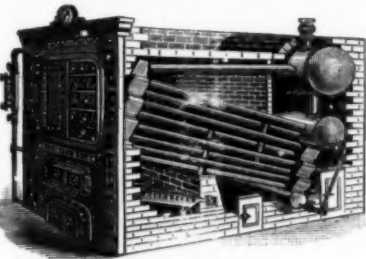
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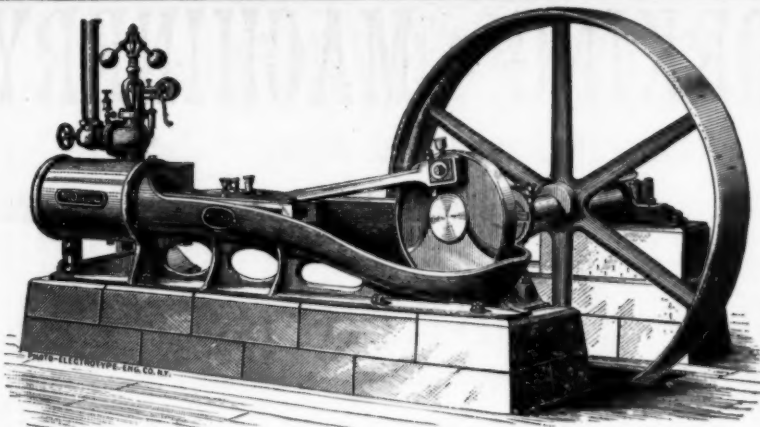
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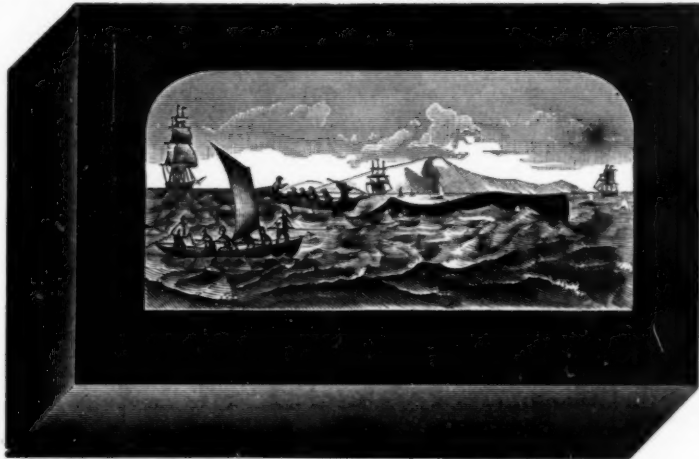
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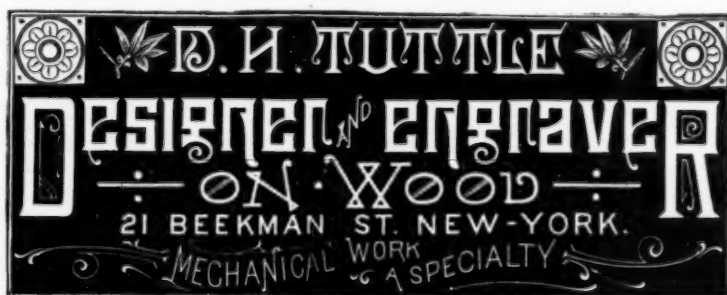
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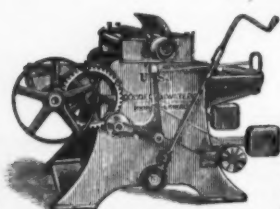
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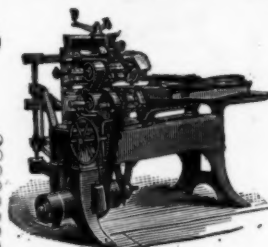
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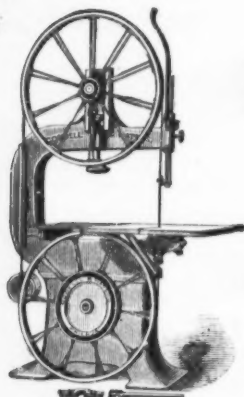


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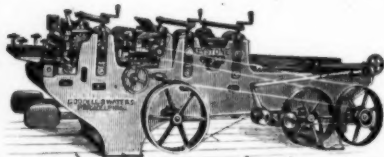
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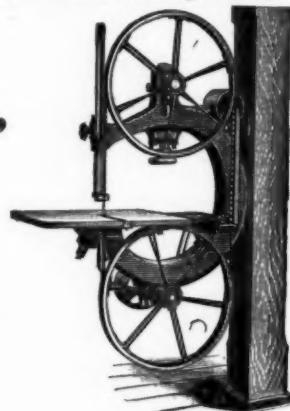
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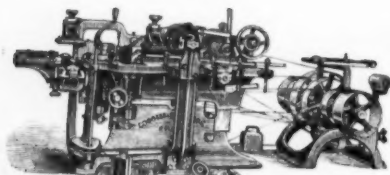


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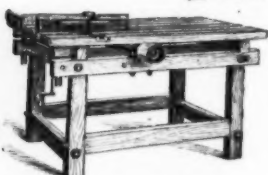
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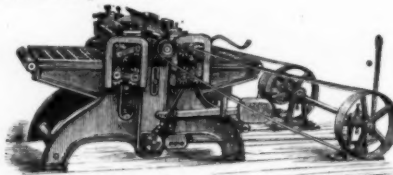
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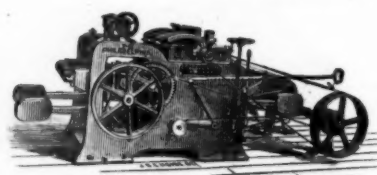
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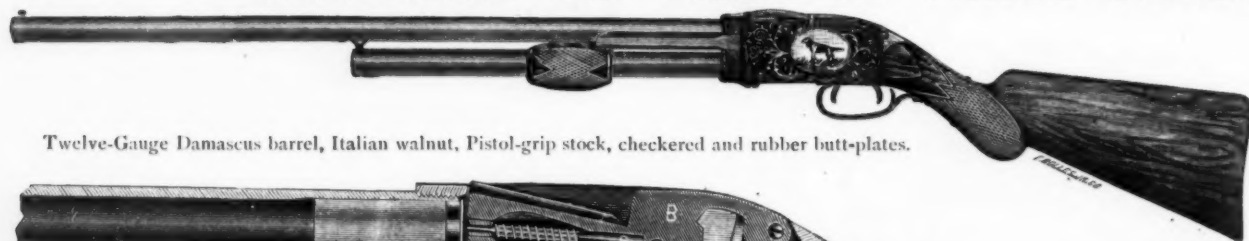
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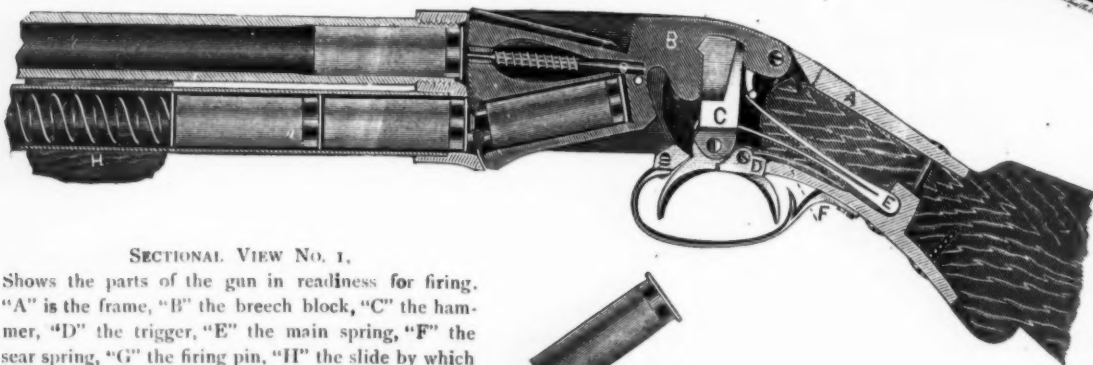
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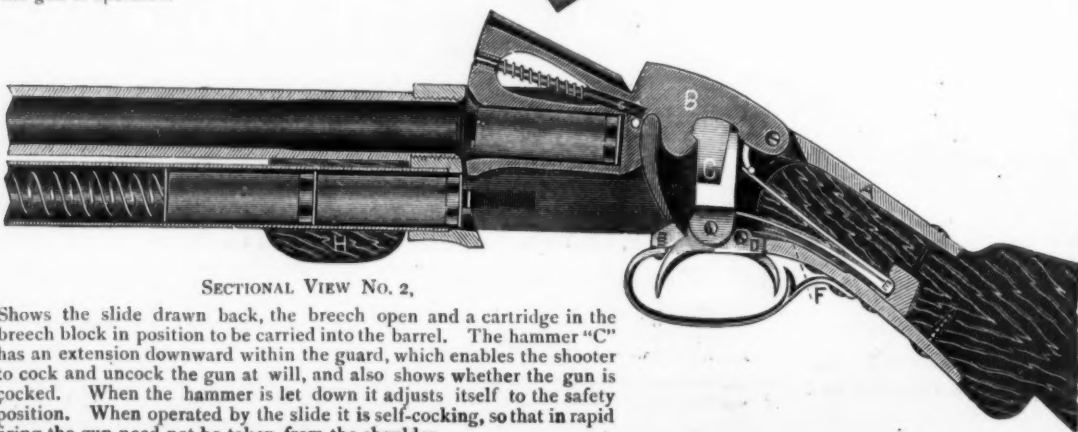


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SECTIONAL VIEW NO. 1.

Shows the parts of the gun in readiness for firing. "A" is the frame, "B" the breech block, "C" the hammer, "D" the trigger, "E" the main spring, "F" the sear spring, "G" the firing pin, "H" the slide by which the gun is operated.



SECTIONAL VIEW NO. 2.

Shows the slide drawn back, the breech open and a cartridge in the breech block in position to be carried into the barrel. The hammer "C" has an extension downward within the guard, which enables the shooter to cock and uncock the gun at will, and also shows whether the gun is cocked. When the hammer is let down it adjusts itself to the safety position. When operated by the slide it is self-cocking, so that in rapid firing the gun need not be taken from the shoulder.

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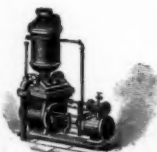
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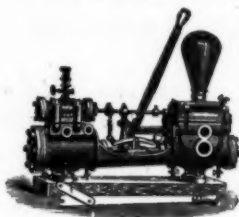
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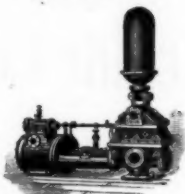
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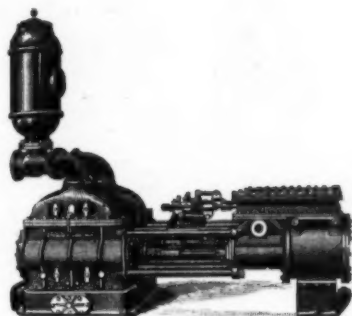


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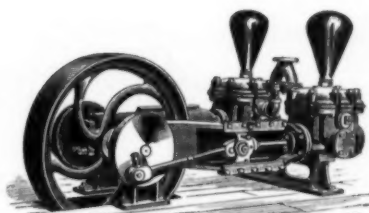


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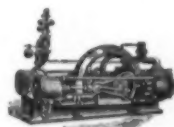
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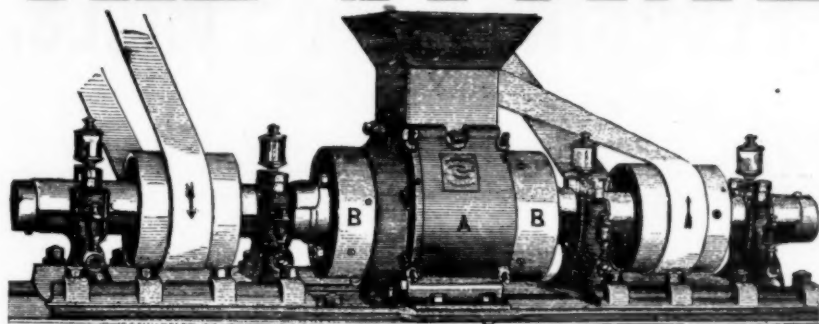
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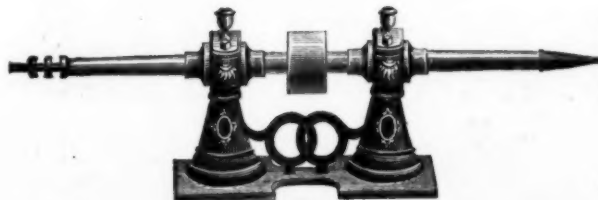
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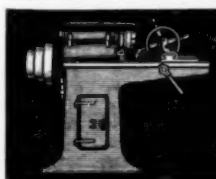
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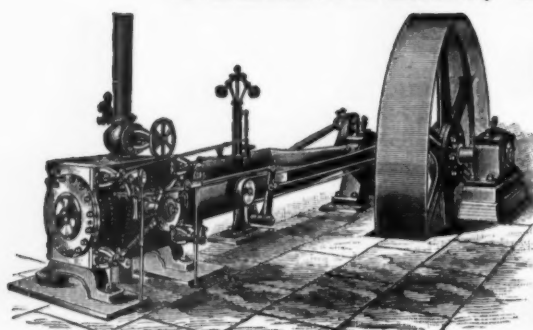
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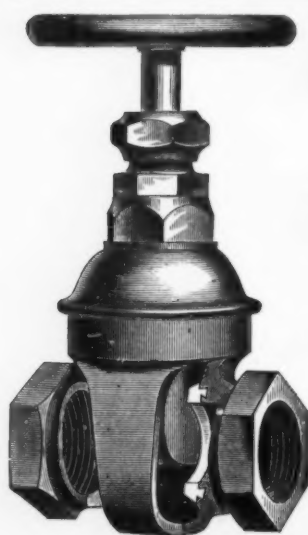
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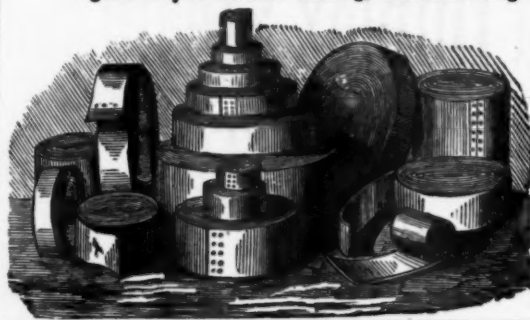
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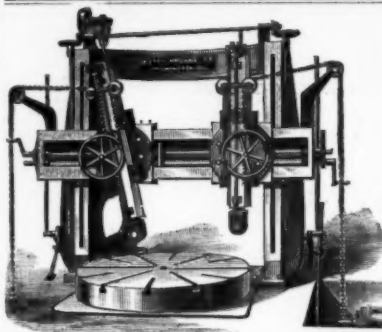
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